

SERVICE MANUAL

COMPACT DISC STEREO
SYSTEM

BASIC TAPE MECHANISM : 2ZM-1YR8N
BASIC CD MECHANISM : DA11T3C

This Service Manual is the "Revision Publishing" and replaces "Simple Manual"
(S/M Code No. 09-003-339-9T1).

SPECIFICATIONS

MAIN UNIT

FM tuner section

Tuning range	87.5 MHz to 108 MHz
Usable sensitivity (IHF)	13.2 dBf
Antenna terminals	75 ohms (unbalanced)

AM tuner section

Tuning range	530 kHz to 1710 kHz (10 kHz step) 531 kHz to 1602 kHz (9 kHz step)
Usable sensitivity	350 μ V/m
Antenna	Loop antenna

Amplifier section

Power output	5.5 W + 5.5 W (100 Hz to 15 kHz, THD less than 1%, 4 ohms) 7 W + 7 W (100 Hz to 15 kHz, THD less than 10%, 4 ohms)
Input	AUX: 500 mV
Outputs	SPEAKERS: accept speakers of 4 ohms or more PHONES (stereo minijack): accepts headphones of 32 ohms or more

Cassette deck section

Track format	4 tracks, 2 channels stereo
Frequency response	Normal tape: 50 Hz – 15000 Hz
Recording system	AC bias
Heads	Recording/playback \times 1 Erase head \times 1

Compact disc player section

Laser	Semiconductor laser (λ = 780 nm)
D-A converter	1 bit linear
Wow and flutter	Unmeasurable

SPEAKER SYSTEM

Speakers	100 mm cone type
Impedance	4 ohms
Dimensions (W \times H \times D)	140 \times 231.5 \times 198 mm (5 $\frac{5}{8}$ \times 9 $\frac{1}{8}$ \times 7 $\frac{7}{8}$ in.)
Weight	1.1 kg (2 lbs 7 oz)

GENERAL

Power requirements	120V AC, 60 Hz
Power consumption	26 W
Dimensions of main unit (W \times H \times D)	160 \times 231.5 \times 197 mm (6 $\frac{3}{8}$ \times 9 $\frac{1}{8}$ \times 7 $\frac{7}{8}$ in.)
Weight of main unit	2.5 kg (5 lbs 8 oz)

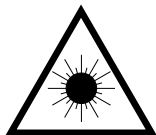
- Design and specifications are subject to change without notice.

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING!

WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION. BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.



- Caution: Invisible laser radiation when open and interlocks defeated avoid exposure to beam.
- Advarsel: Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

VAROITUS!

Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saattaa altistaa käyttäjän turvallisuusluokan 1 ylitäville näkymättömälle lasersäteilylle.

WARNING!

Om apparaten används på annat sätt än vad som specificeras i denna bruksanvisning, kan användaren utsättas för osynlig laserstråling, som överskrider gränsen för laserklass 1.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

ATTENTION

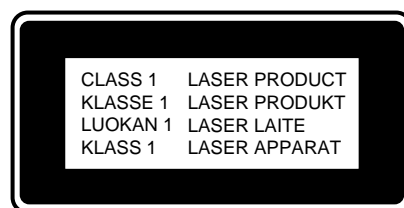
L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

ADVARSEL!

Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

This Compact Disc player is classified as a CLASS 1 LASER product.

The CLASS 1 LASER PRODUCT label is located on the rear exterior.

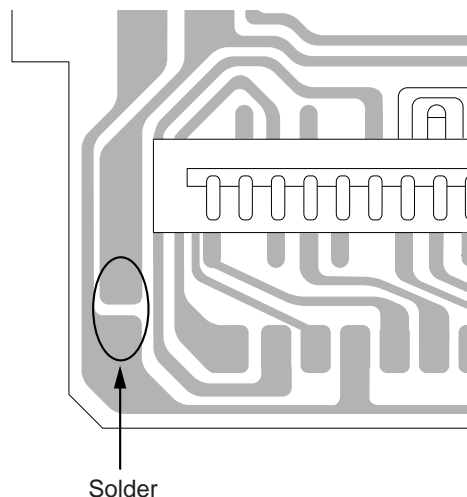


Precaution to replace Optical block (SF-P101NR)

Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure ground body and workbench, and use care the clothes do not touch the diode.

- 1) After the connection, remove solder shown in the right figure.

PICK-UP Assy P.C.B



ELECTRICAL MAIN PARTS LIST

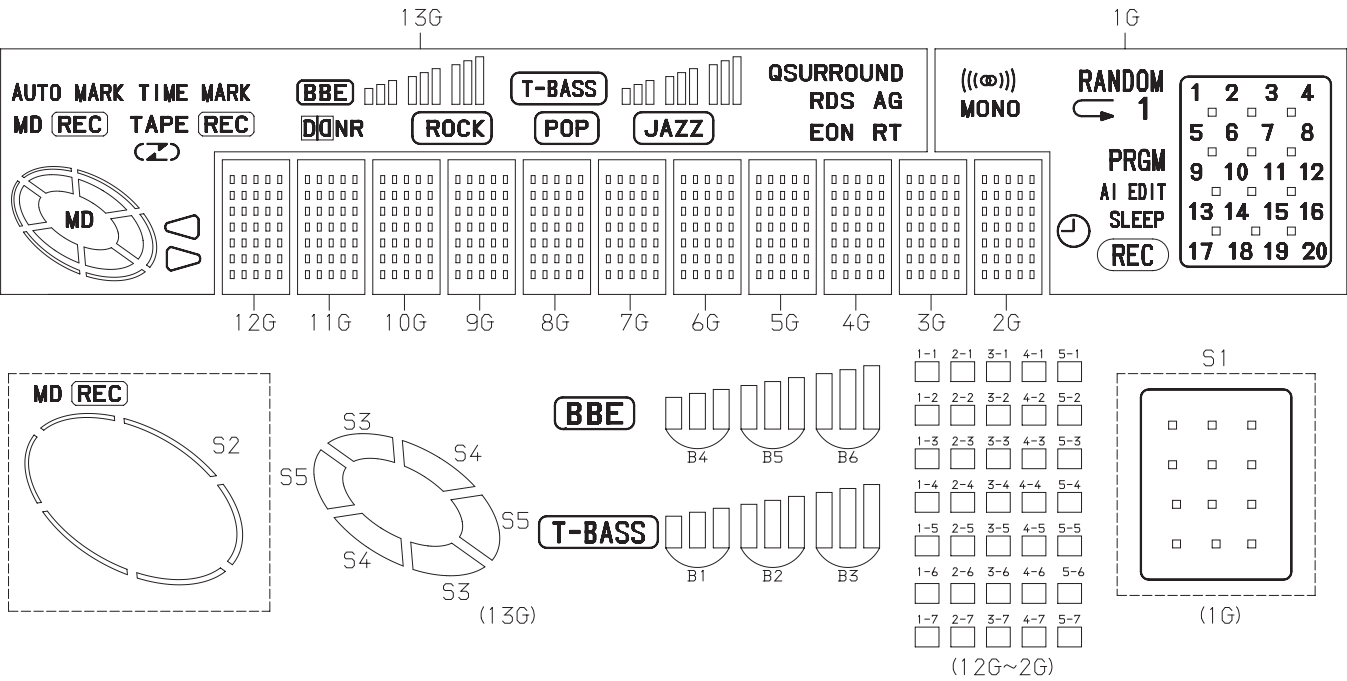
DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
IC				C119	87-010-190-080		S CHIP F 0.01
	87-020-454-010	IC, DN6851		C120	87-010-401-080		CAP, ELECT 1-50V
	87-A20-734-010	IC, TDA2007A		C121	87-010-396-080		CAP, E 470-35 SME
	87-A21-443-040	C-IC, M62495AFP		C122	87-010-213-080		C-CAP, S 0.015-50 B
	8A-CLA-620-010	IC, LC8672408A-5P33		C123	87-010-196-080		CHIP CAPACITOR, 0.1-25
	87-A21-245-010	IC, RPM6938-V4		C124	87-010-402-080		CAP, ELECT 2.2-50V
	87-A21-145-040	C-IC, BA4560F-E2		C125	87-010-402-080		CAP, ELECT 2.2-50V
	87-A20-446-010	C-IC, LA9241ML		C126	87-010-408-080		CAP, ELECT 47-50V
	87-A20-459-010	C-IC, LC78622ED		C127	87-010-248-080		CAP, ELECT 220-10V
	87-A21-093-010	IC, LA6541D		C128	87-010-393-080		CAP, ELECT 100-35V
	87-070-127-110	IC, LC72131 D		C129	87-010-248-080		CAP, ELECT 220-10V
	87-A20-913-010	IC, LA1837NL		C130	87-010-393-080		CAP, ELECT 100-35V
TRANSISTOR				C131	87-010-393-080		CAP, ELECT 100-35V
	87-026-610-080	TR, KTC3198GR		C132	87-010-237-080		CAP, ELECT 1000-16V
	89-213-702-010	TR, 2SB1370 (1.8W)		C136	87-010-197-080		CAP, CHIP 0.01 DM
	89-420-052-080	TR, 2SD2005 (1.2W)		C137	87-010-197-080		CAP, CHIP 0.01 DM
	87-A30-185-010	TR, 2SD1381FQR		C138	87-010-197-080		CAP, CHIP 0.01 DM
	87-026-313-080	TR, DTC343TS		C139	87-010-197-080		CAP, CHIP 0.01 DM
	87-026-609-080	TR, KTA1266GR		C143	87-010-401-080		CAP, ELECT 1-50V
	87-026-218-080	TR, DTC144ES (0.2W)		C144	87-010-401-080		CAP, ELECT 1-50V
	87-026-237-080	CHIP-TR, DTC124XK		C147	87-010-402-080		CAP, ELECT 2.2-50V
	87-026-223-080	TR, DTC143TK		C150	87-010-263-080		CAP, ELECT 100-10V
	89-320-011-080	TR, 2SC2001 (15W)		C151	87-010-263-080		CAP, ELECT 100-10V
	89-112-965-080	TR, 2SA1296 (0.75W)		C152	87-010-182-080		C-CAP, S 2200P-50 B
	89-109-521-080	TR, 2SA952 (0.6W)		C153	87-010-166-080		C-CAP, S 100P-50 SL
	87-A30-091-080	FET, 2SJ460		C154	87-010-545-080		CAP, ELECT 0.22-50V
	87-A30-090-080	FET, 2SK2541		C155	87-010-545-080		CAP, ELECT 0.22-50V
	87-A30-151-080	TR, 2SA1993F		C157	87-010-404-080		CAP, ELECT 4.7-50V
	89-333-317-080	TR, 2SC3331 (0.5W)		C158	87-010-545-080		CAP, ELECT 0.22-50V
	87-026-291-080	TR, DTC124XS		C159	87-010-545-080		CAP, ELECT 0.22-50V
	87-A30-227-080	TR, 2SB1010Q		C161	87-010-404-080		CAP, ELECT 4.7-50V
	87-026-463-080	TR, 2SA933S (0.3W)		C162	87-010-405-080		CAP, ELECT 10-50V
	87-026-210-080	CHIP-TR, DTC144EK		C163	87-010-405-080		CAP, ELECT 10-50V
	87-026-239-080	TR, DTC114TK (0.2W)		C164	87-010-405-080		CAP, ELECT 10-50V
	89-327-143-080	TR, 2SC2714 (0.1W)		C165	87-010-405-080		CAP, ELECT 10-50V
	87-A30-072-080	C-TR, RT1P 144C		C166	87-010-404-080		CAP, ELECT 4.7-50V
DIODE				C167	87-010-404-080		CAP, ELECT 4.7-50V
	87-020-465-080	DIODE, 1SS133 (110MA)		C171	87-010-404-080		CAP, ELECT 4.7-50V
	87-A40-393-090	DIODE, 1N5402GW(F20)		C172	87-010-408-080		CAP, ELECT 47-50V
	87-070-334-080	ZENER, MTZJ10B		C173	87-010-405-080		CAP, ELECT 10-50V
	87-017-932-080	ZENER, MTJ6.2B		C175	87-010-237-080		CAP, ELECT 1000-16V
	87-A40-347-080	ZENER, MTZJ2.2B		C300	87-010-986-080		C-CAP, S 820P-50 J CH
	87-070-136-080	ZENER, MTZJ5.1B		C301	87-010-198-080		CAP, CHIP 0.022
	87-020-027-080	CHIP-DIODE 1SS184		C302	87-010-986-080		C-CAP, S 820P-50 J CH
	87-027-825-080	ZENER, HZ9A3L		C303	87-010-180-080		C-CER 1500P
MAIN C.B				C304	87-010-180-080		C-CER 1500P
C101	87-010-190-080	S CHIP F 0.01		C305	87-010-263-080		CAP, ELECT 100-10V
C102	87-010-190-080	S CHIP F 0.01		C306	87-010-263-080		CAP, ELECT 100-10V
C103	87-010-190-080	S CHIP F 0.01		C307	87-010-956-080		CHIP-CAP, S 0.068-25B
C104	87-010-404-080	CAP, ELECT 4.7-50V		C308	87-010-956-080		CHIP-CAP, S 0.068-25B
C105	87-010-403-080	CAP, ELECT 3.3-50V		C309	87-010-187-080		CAP CHIP S5600P
C106	87-010-192-080	C-CAP, S 0.022-50 F		C310	87-010-187-080		CAP CHIP S5600P
C107	87-010-192-080	C-CAP, S 0.022-50 F		C311	87-010-374-080		CAP, ELECT 47-10V
C108	87-010-192-080	C-CAP, S 0.022-50 F		C312	87-010-546-080		CAP, ELECT 0.33-50V
C109	87-010-192-080	C-CAP, S 0.022-50 F		C313	87-010-546-080		CAP, ELECT 0.33-50V
C110	87-010-190-080	S CHIP F 0.01		C314	87-010-401-080		CAP, ELECT 1-50V
C111	87-016-658-090	CAP, E 4700-35 SMG		C315	87-010-401-080		CAP, ELECT 1-50V
C112	87-012-140-080	CAP 470P		C316	87-010-182-080		C-CAP, S 2200P-50 B
C113	87-010-197-080	CAP, CHIP 0.01 DM		C317	87-010-182-080		C-CAP, S 2200P-50 B
C114	87-010-408-080	CAP, ELECT 47-50V		C318	87-010-188-080		CAP, CHIP 6800P
C115	87-010-112-080	CAP, ELECT 100-16V		C319	87-010-188-080		CAP, CHIP 6800P
C116	87-010-101-080	CAP, ELECT 220-16		C320	87-010-184-080		CHIP CAPACITOR 3300P(K)
C118	87-010-263-080	CAP, ELECT 100-10V		C321	87-010-184-080		CHIP CAPACITOR 3300P(K)
				C322	87-010-321-080		CHIP CAPACITOR, 82P(J)
				C323	87-010-321-080		CHIP CAPACITOR, 82P(J)
				C324	87-010-401-080		CAP, ELECT 1-50V
				C325	87-010-374-080		CAP, ELECT 47-10V
				C326	87-010-198-080		CAP, CHIP 0.022
				C327	87-010-183-080		C-CAP, S 2700P-50 B
				C328	87-010-183-080		C-CAP, S 2700P-50 B

REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
C329	87-010-183-080	C-CAP,S 2700P-50 B		C960	87-010-196-080		CHIP CAPACITOR,0.1-25
C331	87-010-382-080	CAP, ELECT 22-25V		C961	87-012-170-080		C-CAP,U 8P-50 CH
C332	87-010-187-080	CAP CHIP S5600P		C963	87-010-196-080		CHIP CAPACITOR,0.1-25
C333	87-010-178-080	CHIP CAP 1000P		CF801	87-008-261-010		FILTER, SFE10.7MA5-A
C334	87-010-175-080	CAP 560P		CF802	87-008-261-010		FILTER, SFE10.7MA5-A
C335	87-012-158-080	C-CAP,S 390P-50 CH		CON301	87-099-832-010		CONN,8P S2M-8W
C336	87-012-158-080	C-CAP,S 390P-50 CH		△F101	87-035-416-010		FUSE,T3A 250V UL
C337	87-010-198-080	CAP, CHIP 0.022		△FC101	87-033-213-080		CLAMP, FUSE
C701	87-010-381-080	CAP, ELECT 330-16V		△FC102	87-033-213-080		CLAMP, FUSE
C702	87-010-404-080	CAP, ELECT 4.7-50V		FFE801	A8-8ZA-193-070		8ZA-1 YFEUNC
C703	87-012-286-080	CAP, U 0.01-25		J101	8A-CLA-624-010		JACK,PIN 3P AUX
C704	87-012-286-080	CAP, U 0.01-25		J102	87-A60-754-010		TERMINAL,SPK 4P MSP-154V-05
C709	87-012-195-080	C-CAP,U 100P-50CH		J103	87-A60-420-010		JACK,3.5 ST (MSC)
C711	87-010-263-080	CAP, ELECT 100-10V		J801	87-A60-202-010		TERMINAL,ANT 4P MSP-154V-02
C712	87-010-831-080	C-CAP,U,0.1-16F		L101	87-005-366-010		COIL, 1UH
C714	87-012-286-080	CAP, U 0.01-25		L102	87-005-366-010		COIL, 1UH
C717	87-012-286-080	CAP, U 0.01-25		L104	87-005-676-080		COIL,2.2UH K LF5.0S
C719	87-012-286-080	CAP, U 0.01-25		L302	87-007-342-010		COIL,OSC 85K BIAS
C720	87-012-195-080	C-CAP,U 100P-50CH		L771	87-A50-266-010		COIL,FM DET-2N(TOK)
C721	87-012-176-080	CAP 15P		L772	87-A90-733-010		FLTR,PCFAZH-450 (TOK)
C722	87-012-176-080	CAP 15P		L773	87-NF4-650-010		COIL,AM PACK 4N(TOK)
C723	87-012-274-080	CHIP CAP,U 1000P-50B		△PR100	87-A90-069-080		FUSE,2A 125V 251
C725	87-012-274-080	CHIP CAP,U 1000P-50B		PR101	87-035-495-080		FUSE,3/4A 125V D/U/C
C727	87-010-196-080	CHIP CAPACITOR,0.1-25		R103	87-022-480-080		RES,NF 2.2-1/4W J
C728	87-010-248-080	CAP, ELECT 220-10V		R118	87-029-118-090		RES,FUSE 220-1/2W J
C729	87-012-274-080	CHIP CAP,U 1000P-50B		R362	87-029-090-010		RES FUSE,22-1/4
C731	87-012-286-080	CAP, U 0.01-25		WH101	87-099-043-010		CONN 2P EH
C756	87-012-286-080	CAP, U 0.01-25		X721	87-A70-061-010		VIB,XTAL 4.500MHZ CSA-309
C757	87-012-188-080	C-CAP,U 47P-50 CH					
C758	87-012-167-080	C-CAP,U 5P-50 CH					
C763	87-010-829-080	CAP, U 0.047-16		FRONT C.B			
C764	87-012-337-080	C-CAP,U 56P-50 CH		C201	87-010-375-080		CAP,E 330-10 SME
C765	87-012-286-080	CAP, U 0.01-25		C202	87-012-350-080		C-CAP,1-25 F
C768	87-012-286-080	CAP, U 0.01-25		C203	87-010-197-080		CAP, CHIP 0.01 DM
C769	87-010-260-080	CAP, ELECT 47-25V		C205	87-010-178-080		CHIP CAP 1000P
C770	87-010-829-080	CAP, U 0.047-16		C208	87-010-197-080		CAP, CHIP 0.01 DM
C771	87-010-383-080	CAP, ELECT 33-25V		C209	87-010-196-080		CHIP CAPACITOR,0.1-25
C772	87-010-829-080	CAP, U 0.047-16		C210	87-010-196-080		CHIP CAPACITOR,0.1-25
C773	87-010-196-080	CHIP CAPACITOR,0.1-25		C211	87-010-314-080		C-CAP,S 22P-50V
C774	87-010-263-080	CAP, ELECT 100-10V		C212	87-010-318-080		C-CAP,S 47P-50 CH
C775	87-010-404-080	CAP, ELECT 4.7-50V		C213	87-010-154-080		CAP CHIP 10P
C776	87-012-286-080	CAP, U 0.01-25		C214	87-012-149-080		C-CAP,S 30P-50 CH
C777	87-010-400-080	CAP, ELECT 0.47-50V		C215	87-010-312-080		C-CAP,S 15P-50 CH
C778	87-010-401-080	CAP, ELECT 1-50V		C216	87-010-400-080		CAP, ELECT 0.47-50V
C779	87-010-401-080	CAP, ELECT 1-50V		C217	87-010-196-080		CHIP CAPACITOR,0.1-25
C780	87-010-196-080	CHIP CAPACITOR,0.1-25		CN201	87-099-720-010		CONN,30P TYK-B(P)
C781	87-010-405-080	CAP, ELECT 10-50V		CN202	87-A60-404-010		CONN,3P TKX-P03P-F1
C782	87-010-405-080	CAP, ELECT 10-50V		CN203	8A-CLA-621-010		CONN ASSY,9P MOTOR
C783	87-012-286-080	CAP, U 0.01-25		L206	87-003-098-080		COIL,2.2UH
C784	87-012-286-080	CAP, U 0.01-25		LCD201	8Z-CL8-665-110		LCD,ZCL-8
C785	87-010-401-080	CAP, ELECT 1-50V		S200	87-A90-095-080		SW,TACT EVQ11G04M
C786	87-010-401-080	CAP, ELECT 1-50V		S201	87-A90-095-080		SW,TACT EVQ11G04M
C789	87-012-275-080	C-CAP,U 1200P-50 B		S202	87-A90-095-080		SW,TACT EVQ11G04M
C790	87-012-275-080	C-CAP,U 1200P-50 B		S203	87-A90-095-080		SW,TACT EVQ11G04M
C791	87-010-405-080	CAP, ELECT 10-50V		S204	87-A90-095-080		SW,TACT EVQ11G04M
C793	87-012-273-080	C-CAP,U 820P-50 B		S205	87-A90-095-080		SW,TACT EVQ11G04M
C794	87-010-406-080	CAP, ELECT 22-50		S206	87-A90-095-080		SW,TACT EVQ11G04M
C795	87-010-596-080	CAP, S 0.047-16		S207	87-A90-095-080		SW,TACT EVQ11G04M
C796	87-010-403-080	CAP, ELECT 3.3-50V		S208	87-A90-095-080		SW,TACT EVQ11G04M
C797	87-012-278-080	C-CAP,U 2200P-50 B		S209	87-A90-095-080		SW,TACT EVQ11G04M
C798	87-012-278-080	C-CAP,U 2200P-50 B		S214	87-A90-095-080		SW,TACT EVQ11G04M
C799	87-010-829-080	CAP, U 0.047-16		S215	87-A90-095-080		SW,TACT EVQ11G04M
C812	87-012-286-080	CAP, U 0.01-25		S216	87-A90-095-080		SW,TACT EVQ11G04M
C820	87-010-260-080	CAP, ELECT 47-25V		S217	87-A90-095-080		SW,TACT EVQ11G04M
C821	87-012-286-080	CAP, U 0.01-25		S218	87-A90-095-080		SW,TACT EVQ11G04M
C822	87-012-286-080	CAP, U 0.01-25		S219	87-A90-095-080		SW,TACT EVQ11G04M
C823	87-012-286-080	CAP, U 0.01-25		S220	87-A90-095-080		SW,TACT EVQ11G04M
C828	87-010-196-080	CHIP CAPACITOR,0.1-25		X201	87-030-364-010		VIB,XTAL 32.768K CT
C829	87-010-196-080	CHIP CAPACITOR,0.1-25		X202	87-A70-185-080		VIB,CER 5.76MHZ TF21
C959	87-010-831-080	C-CAP,U,0.1-16F					

REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
CD C.B				C601	87-010-197-080		CAP, CHIP 0.01 DM
C500	87-016-459-040	CAP,E 470-10 SMG		CN501	87-009-345-010		CONN,2P PH H
C502	87-016-459-040	CAP,E 470-10 SMG		CN510	87-009-034-010		CONN,6P PH V
C503	87-016-459-040	CAP,E 470-10 SMG		CN520	87-A60-248-010		CONN,16P H CFF1416
C505	87-010-196-080	CHIP CAPACITOR,0.1-25		L501	87-005-647-080		COIL,10UH K LF5S
C507	87-010-196-080	CHIP CAPACITOR,0.1-25		L502	87-005-659-080		COIL,100UH K LF5.0S
C510	87-010-197-080	CAP, CHIP 0.01 DM		R503	87-029-019-010		RES, FUSEIBLE 1/2W-2.2
C513	87-010-196-080	CHIP CAPACITOR,0.1-25		SFR501	87-A90-787-080		SFR,100K H HOKU
C514	87-010-196-080	CHIP CAPACITOR,0.1-25		X501	87-A70-046-010		VIB,XTAL 16.934MHZ
C515	87-012-157-080	C-CAP,S 330P-50 CH		LED C.B			
C516	87-010-545-080	CAP, ELECT 0.22-50V		D941	87-A40-365-080		LED,L-1154 SGD
C521	87-010-186-080	CAP,CHIP 4700P		D942	87-A40-365-080		LED,L-1154 SGD
C525	87-010-176-080	C-CAP,S 680P-50 SL		D943	87-A40-365-080		LED,L-1154 SGD
C528	87-012-156-080	C-CAP,S 220P-50 CH		D944	87-A40-365-080		LED,L-1154 SGD
C529	87-010-545-080	CAP, ELECT 0.22-50V		D945	87-A40-365-080		LED,L-1154 SGD
C530	87-012-140-080	CAP 470P		D946	87-A40-365-080		LED,L-1154 SGD
C531	87-010-374-080	CAP, ELECT 47-10V		D947	87-A40-365-080		LED,L-1154 SGD
C532	87-010-401-080	CAP, ELECT 1-50V		D948	87-A40-365-080		LED,L-1154 SGD
C533	87-010-184-080	CHIP CAPACITOR 3300P(K)		D949	87-A40-365-080		LED,L-1154 SGD
C535	87-010-145-080	C-CAP,S 1P-50 CH		AC C.B			
C536	87-010-312-080	C-CAP,S 15P-50 CH		C181	87-012-368-010		C-CAP,S 0.1-50 F
C537	87-010-309-080	C-CAP,1000P-50 CH		C182	87-012-368-010		C-CAP,S 0.1-50 F
C538	87-010-196-080	CHIP CAPACITOR,0.1-25		CNA101	8A-CLA-630-010		CONN ASSY,2P PT
C539	87-010-404-080	CAP, ELECT 4.7-50V		T1	87-A60-317-010		TERMINAL, 1P MSC
C540	87-010-196-080	CHIP CAPACITOR,0.1-25		T2	87-A60-317-010		TERMINAL, 1P MSC
C541	87-010-405-080	CAP, ELECT 10-50V		MOTOR C.B			
C542	87-010-369-080	C-CAP,S 0.033-25 K B		M2	9X-262-576-910		MOTOR GEAR ASSY
C545	87-010-197-080	CAP, CHIP 0.01 DM		PIN3	91-564-722-110		CONNECTOR 6P
C546	87-010-374-080	CAP, ELECT 47-10V		SW1	91-572-085-120		LEAF SW
C547	87-010-263-080	CAP, ELECT 100-10V		DECK C.B			
C548	87-010-248-080	CAP, ELECT 220-10V		CN1	87-009-352-010		CONN,9P PH H
C549	87-010-198-080	CAP, CHIP 0.022		SFR1	87-024-581-010		SFR,3.3K DIA6V K0A
C550	87-010-248-080	CAP, ELECT 220-10V		SOL2	82-ZM1-618-410		SOL ASSY,27K
C551	87-010-166-080	C-CAP,S 100P-50 SL		SW2	87-A90-248-010		SW,MICRO ESE11SH2CXQ
C552	87-010-197-080	CAP, CHIP 0.01 DM		SW3	87-A90-248-010		SW,MICRO ESE11SH2CXQ
C553	87-010-374-080	CAP, ELECT 47-10V		SW5	87-A90-248-010		SW,MICRO ESE11SH2CXQ
C555	87-010-403-080	CAP, ELECT 3.3-50V		SW6	87-A90-248-010		SW,MICRO ESE11SH2CXQ
C556	87-010-197-080	CAP, CHIP 0.01 DM		RELAY C.B			
C557	87-010-197-080	CAP, CHIP 0.01 DM					
C558	87-010-197-080	CAP, CHIP 0.01 DM					
C559	87-010-315-080	C-CAP,S 27P-50 CH					
C560	87-010-263-080	CAP, ELECT 100-10V					
C561	87-010-196-080	CHIP CAPACITOR,0.1-25					
C562	87-010-196-080	CHIP CAPACITOR,0.1-25					
C563	87-012-156-080	C-CAP,S 220P-50 CH					
C565	87-010-263-080	CAP, ELECT 100-10V					
C566	87-010-196-080	CHIP CAPACITOR,0.1-25					
C568	87-010-197-080	CAP, CHIP 0.01 DM					
C570	87-010-197-080	CAP, CHIP 0.01 DM					
C571	87-010-248-080	CAP, ELECT 220-10V					
C572	87-010-196-080	CHIP CAPACITOR,0.1-25					
C573	87-010-197-080	CAP, CHIP 0.01 DM					
C574	87-010-197-080	CAP, CHIP 0.01 DM					
C578	87-010-197-080	CAP, CHIP 0.01 DM					
C579	87-010-263-080	CAP, ELECT 100-10V					
C582	87-010-197-080	CAP, CHIP 0.01 DM					
C583	87-010-405-080	CAP, ELECT 10-50V					
C584	87-010-170-080	S CHIP SL 220P(K)					
C586	87-010-170-080	S CHIP SL 220P(K)					
C587	87-010-166-080	C-CAP,S 100P-50 SL					
C589	87-010-166-080	C-CAP,S 100P-50 SL					
C590	87-010-166-080	C-CAP,S 100P-50 SL					
C591	87-010-166-080	C-CAP,S 100P-50 SL					
C592	87-010-166-080	C-CAP,S 100P-50 SL					
C593	87-010-197-080	CAP, CHIP 0.01 DM					
C594	87-010-263-080	CAP, ELECT 100-10V					
C596	87-010-404-080	CAP, ELECT 4.7-50V					
C597	87-010-197-080	CAP, CHIP 0.01 DM					
C598	87-010-197-080	CAP, CHIP 0.01 DM					

GRID ASSIGNMENT

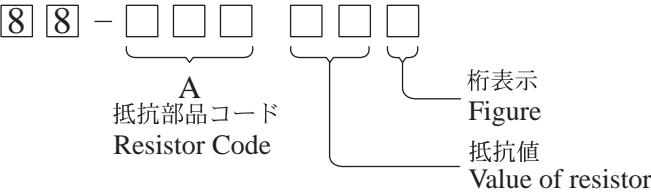


ANODE CONNECTION


	13G	12G~2G	1G		13G	12G~2G	1G
P1	JAZZ	1-1	1	P19)	4-4	8
P2	POP	2-1	↶	P20	⌵	5-4	9
P3	ROCK	3-1	MONO	P21	(1-5	10
P4	DO NR	4-1	RANDOM	P22	TAPE REC	2-5	11
P5	RT	5-1	((∞))	P23	S2	3-5	12
P6	EON	1-2	PRGM	P24	S3	4-5	13
P7	AG	2-2	AI	P25	S4	5-5	14
P8	RDS	3-2	EDIT	P26	S5	1-6	15
P9	B1	4-2	SLEEP	P27	MD	2-6	16
P10	B2	5-2	⌚	P28	TIME MARK	3-6	17
P11	B3	1-3	REC	P29	AUTO MARK	4-6	18
P12	T-BASS	2-3	(CALENDAR) 1	P30	QSURROUND	5-6	19
P13	B4	3-3	2	P31	-	1-7	20
P14	B5	4-3	3	P32	-	2-7	S1
P15	B6	5-3	4	P33	-	3-7	-
P16	BBE	1-4	5	P34	-	4-7	-
P17	⌵	2-4	6	P35	-	5-7	-
P18	⌵	3-4	7				

チップ抵抗部品コード／CHIP RESISTOR PART CODE

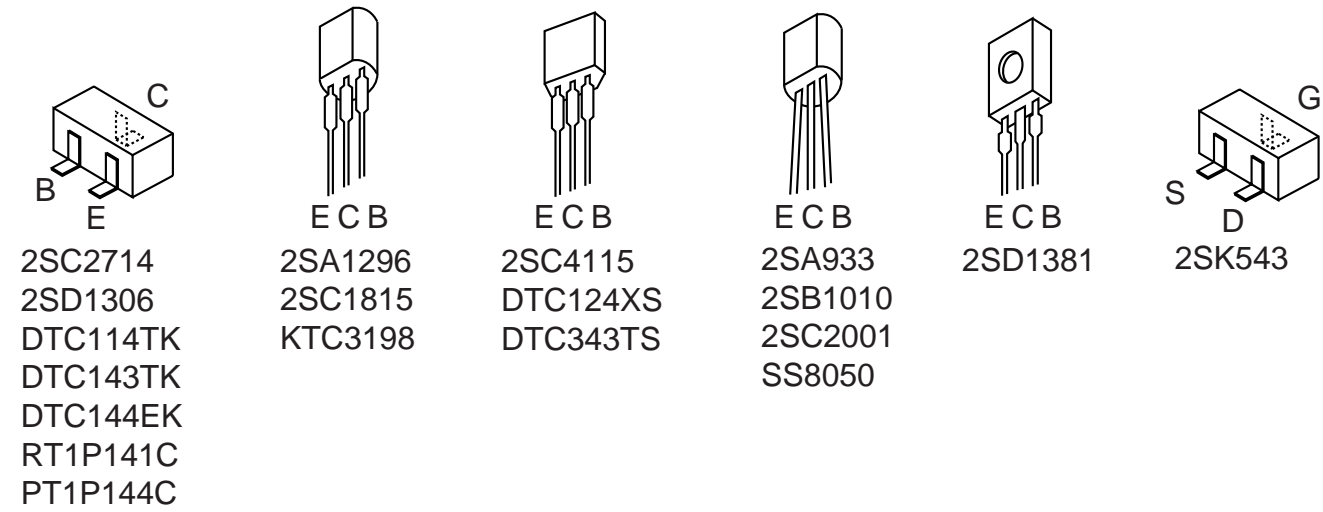
チップ抵抗部品コードの成り立ち
Chip Resistor Part Coding



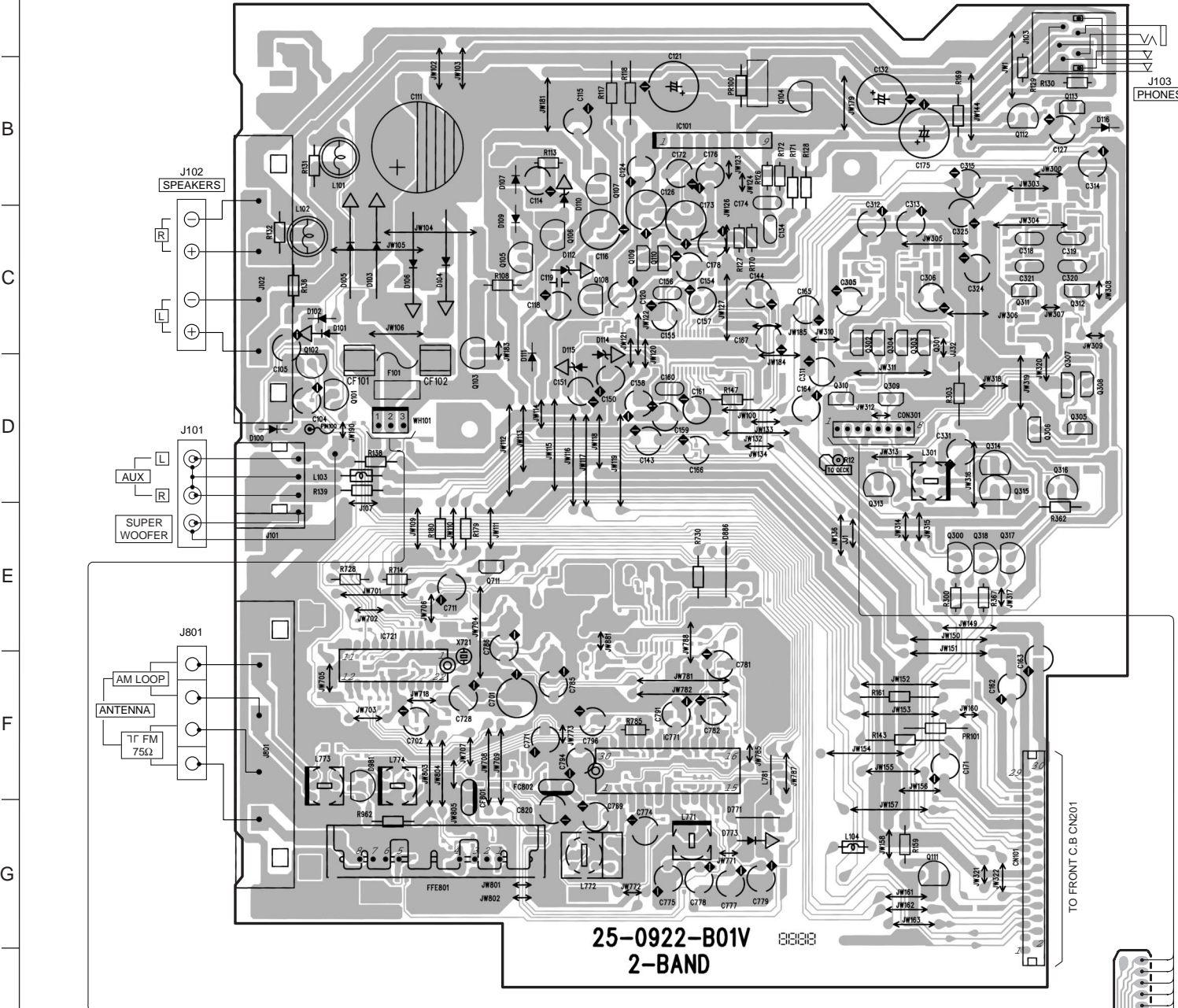
チップ抵抗
Chip resistor

容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法／Dimensions (mm)				抵抗コード : A Resistor Code : A
				外形／Form	L	W	t	
1/16W	1005	± 5%	CJ		1.0	0.5	0.35	104
1/16W	1608	± 5%	CJ		1.6	0.8	0.45	108
1/10W	2125	± 5%	CJ		2	1.25	0.45	118
1/8W	3216	± 5%	CJ		3.2	1.6	0.55	128

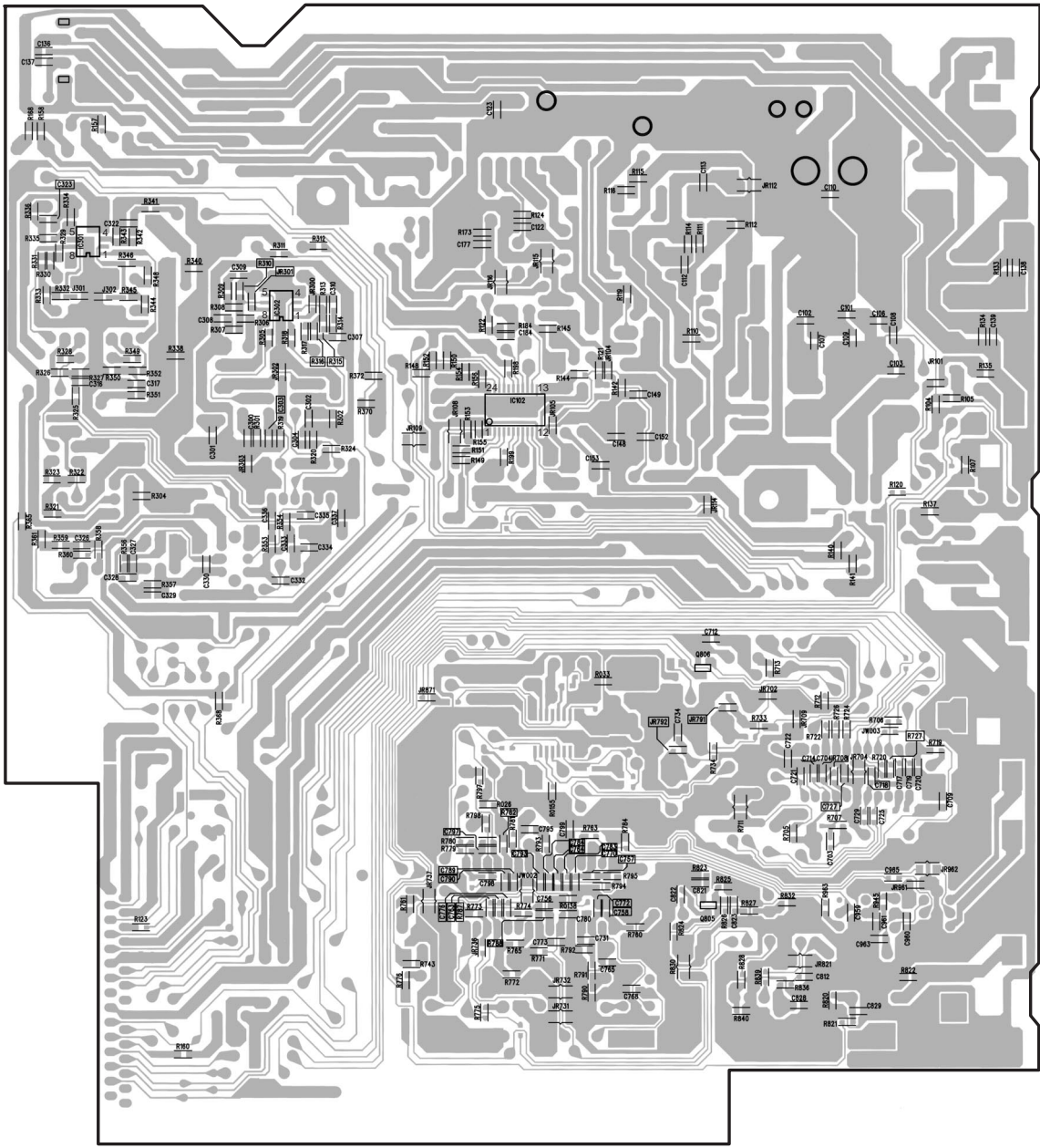
TRANSISTOR ILLUSTRATION



MAIN C.B (INSERTED PARTS)

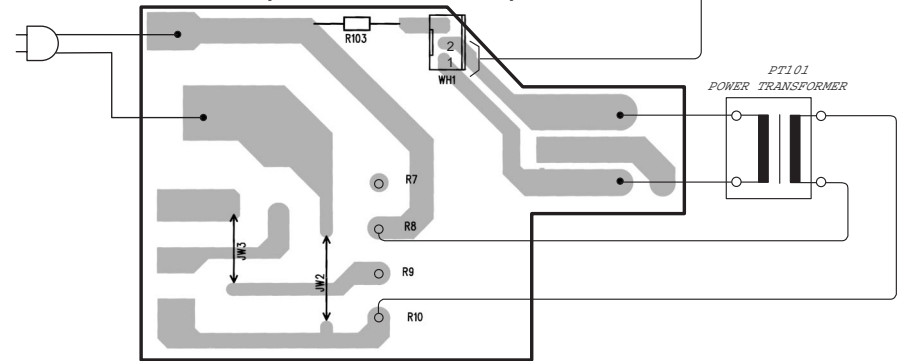


MAIN C.B (CHIP PARTS)

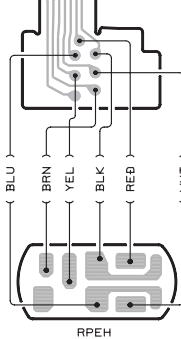


25-0922-B01V
2-BAND

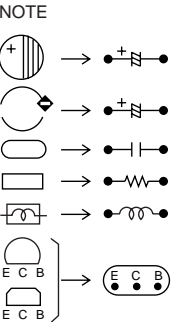
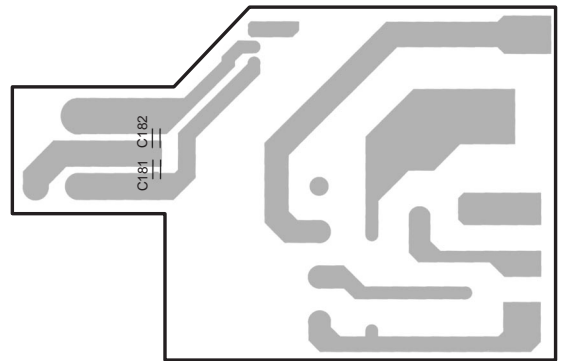
AC C.B (INSERTED PARTS)



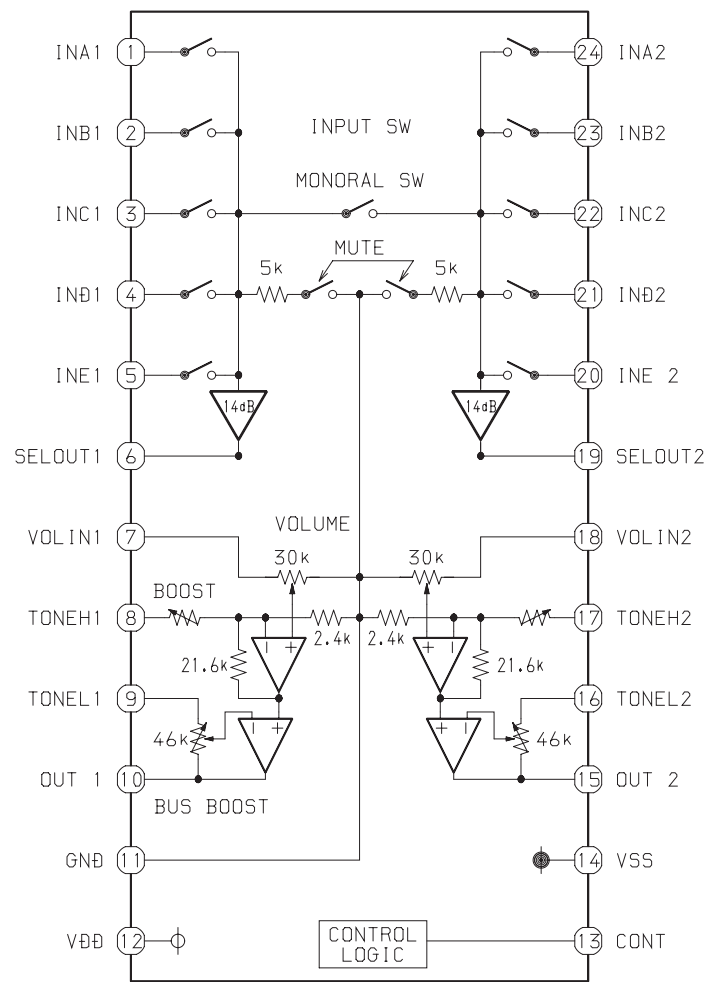
RELAY C.B



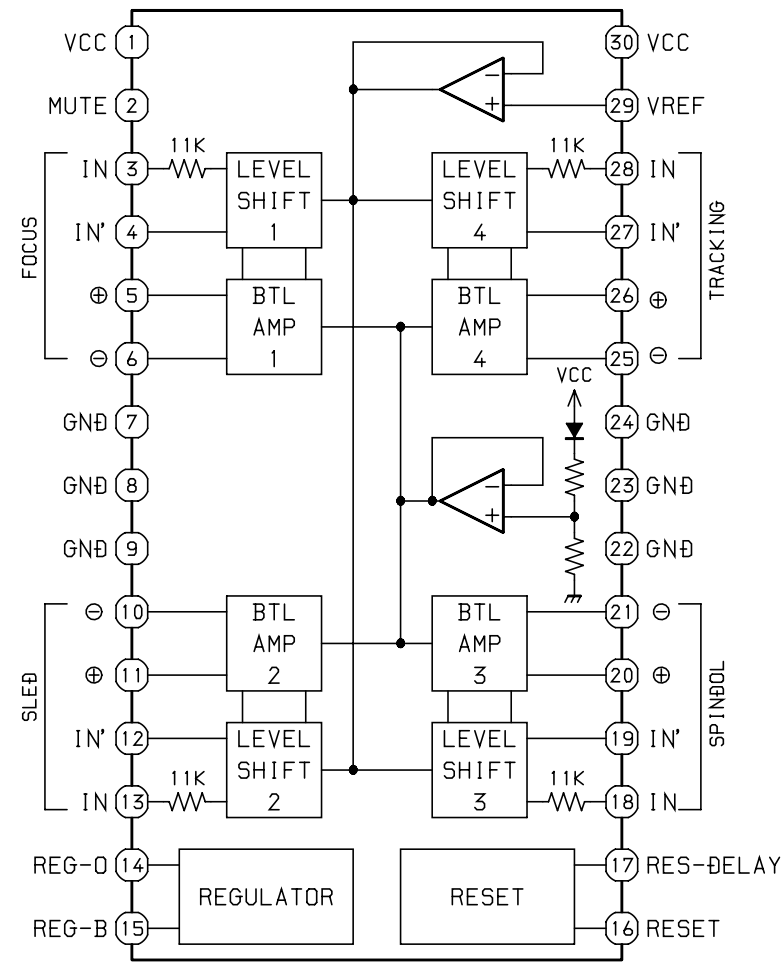
AC C.B (CHIP PARTS)



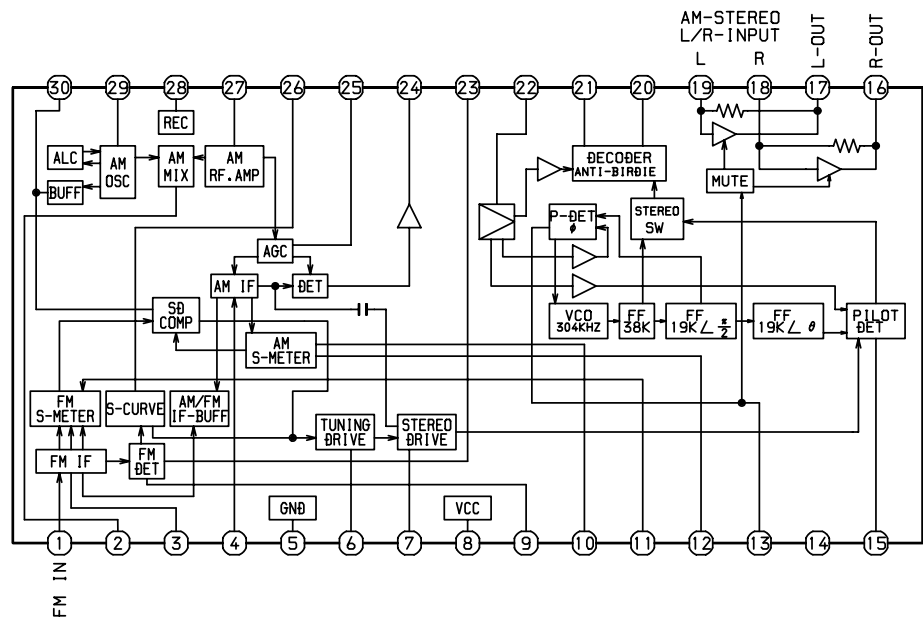
IC BLOCK DIAGRAM
IC, M62495AFP



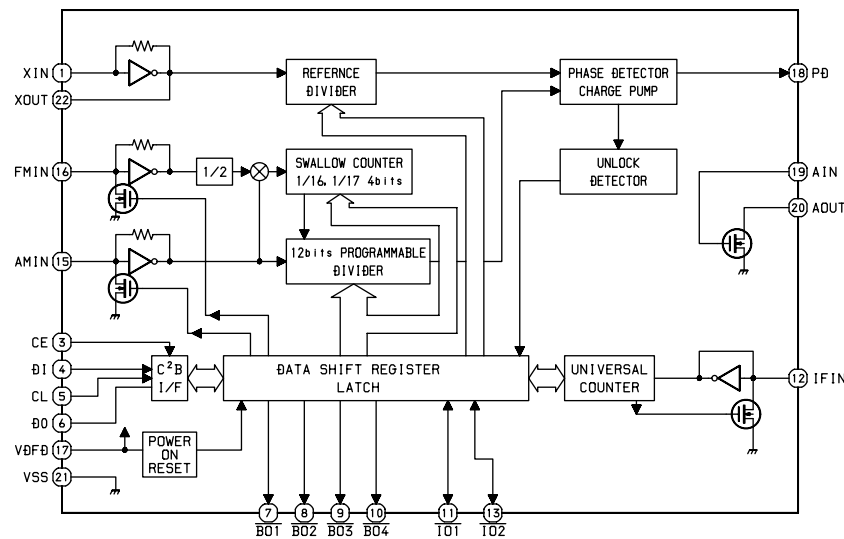
IC, LA6541D



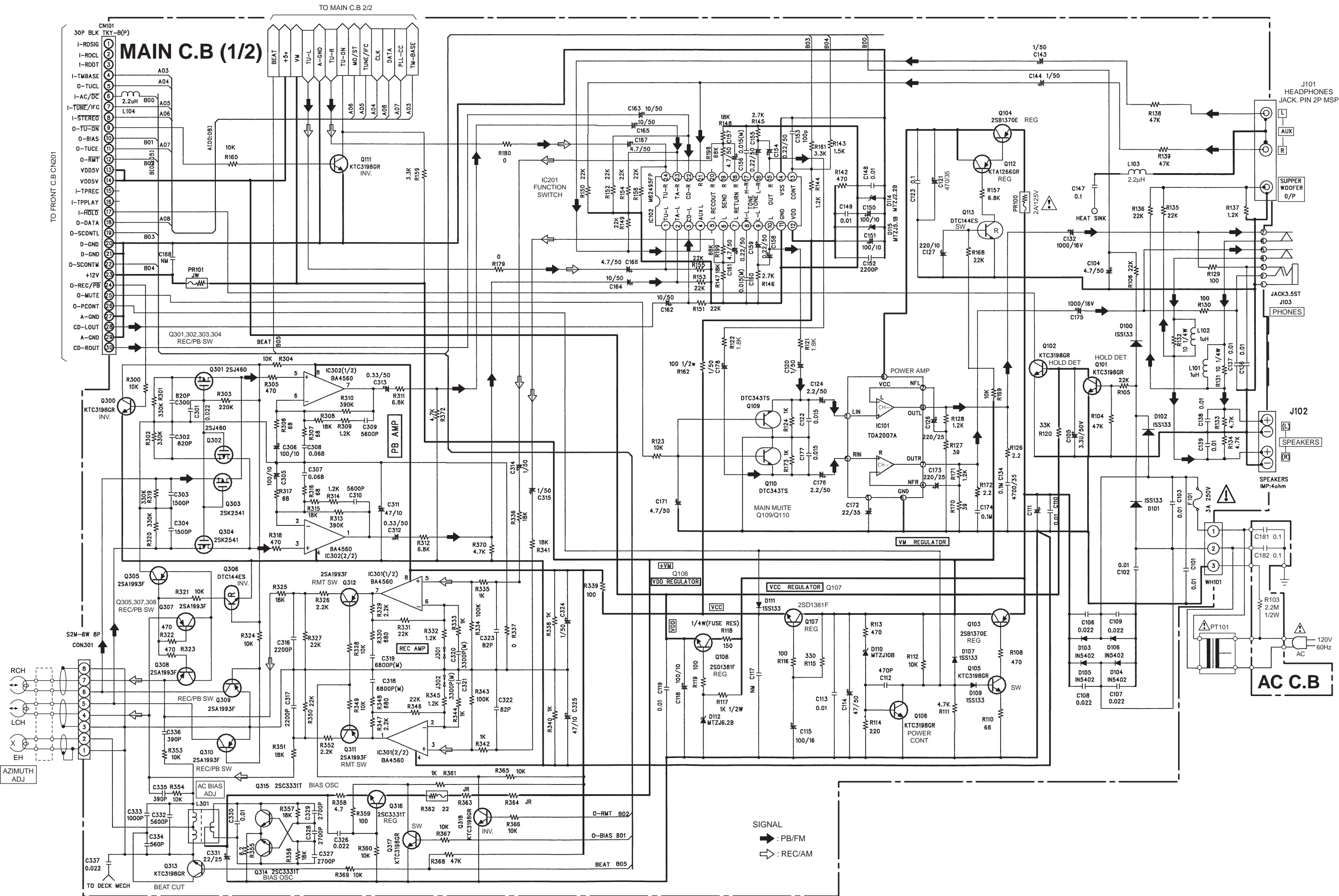
IC, LA1837NL

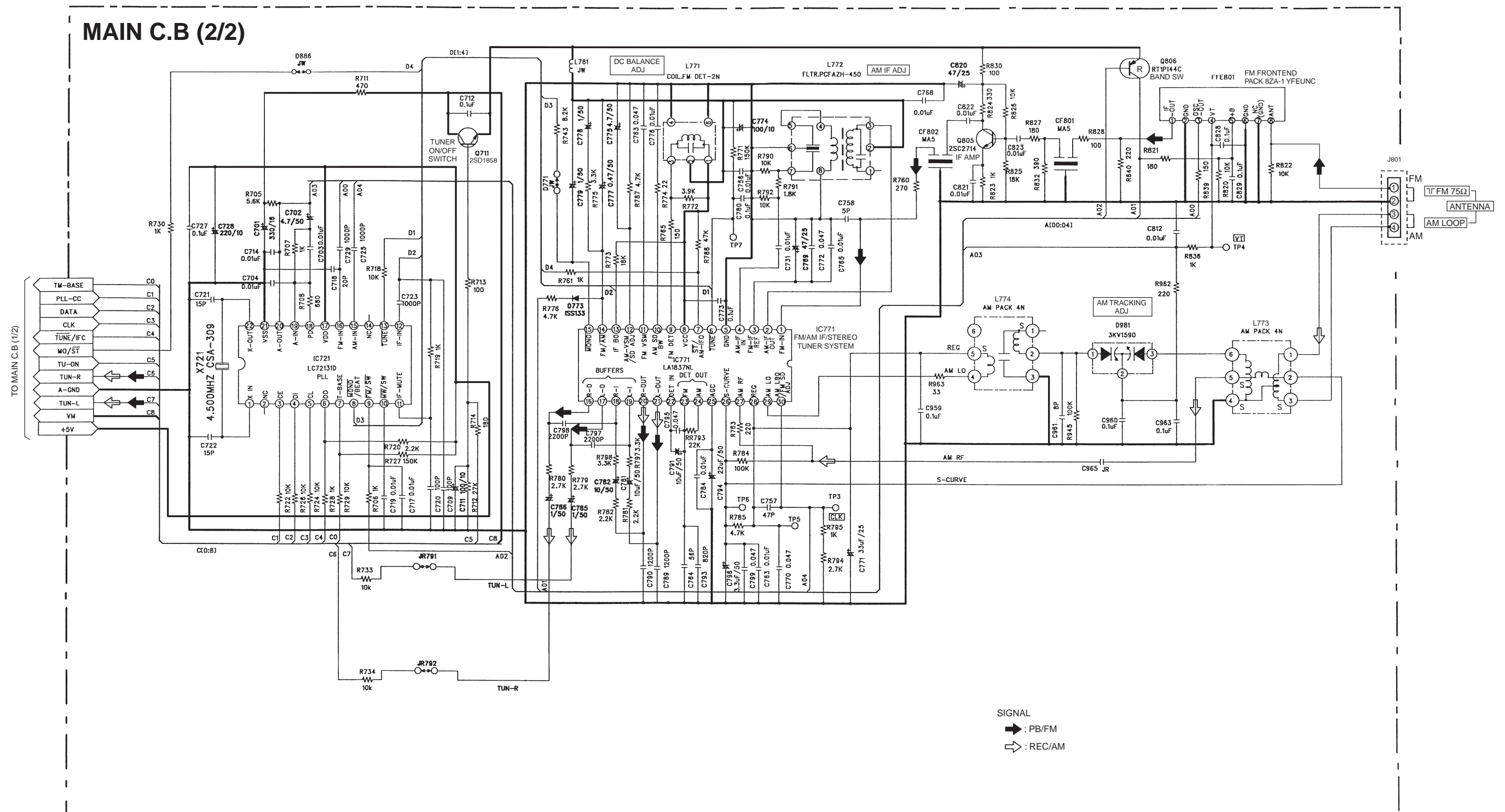


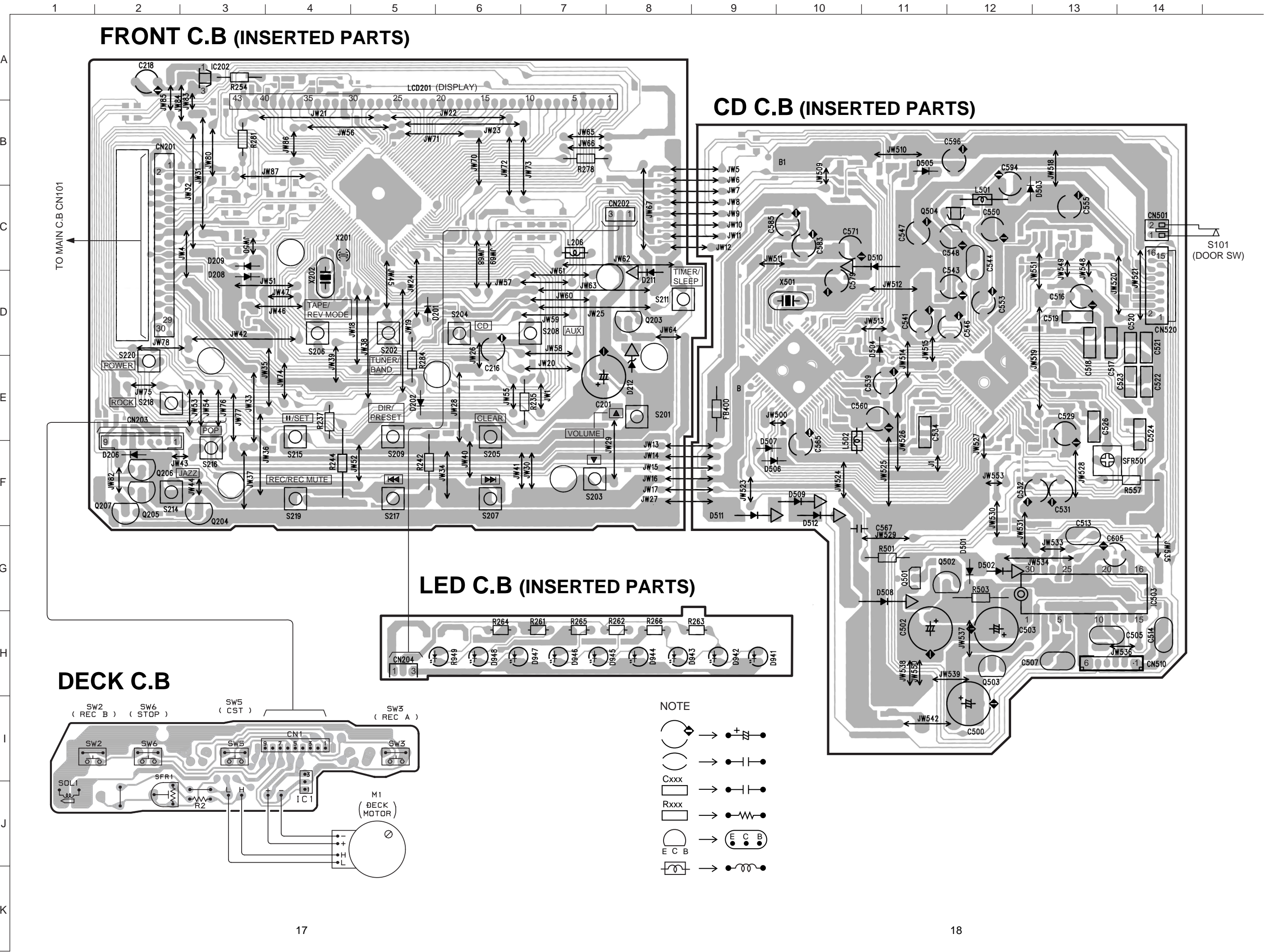
IC, LC72131D

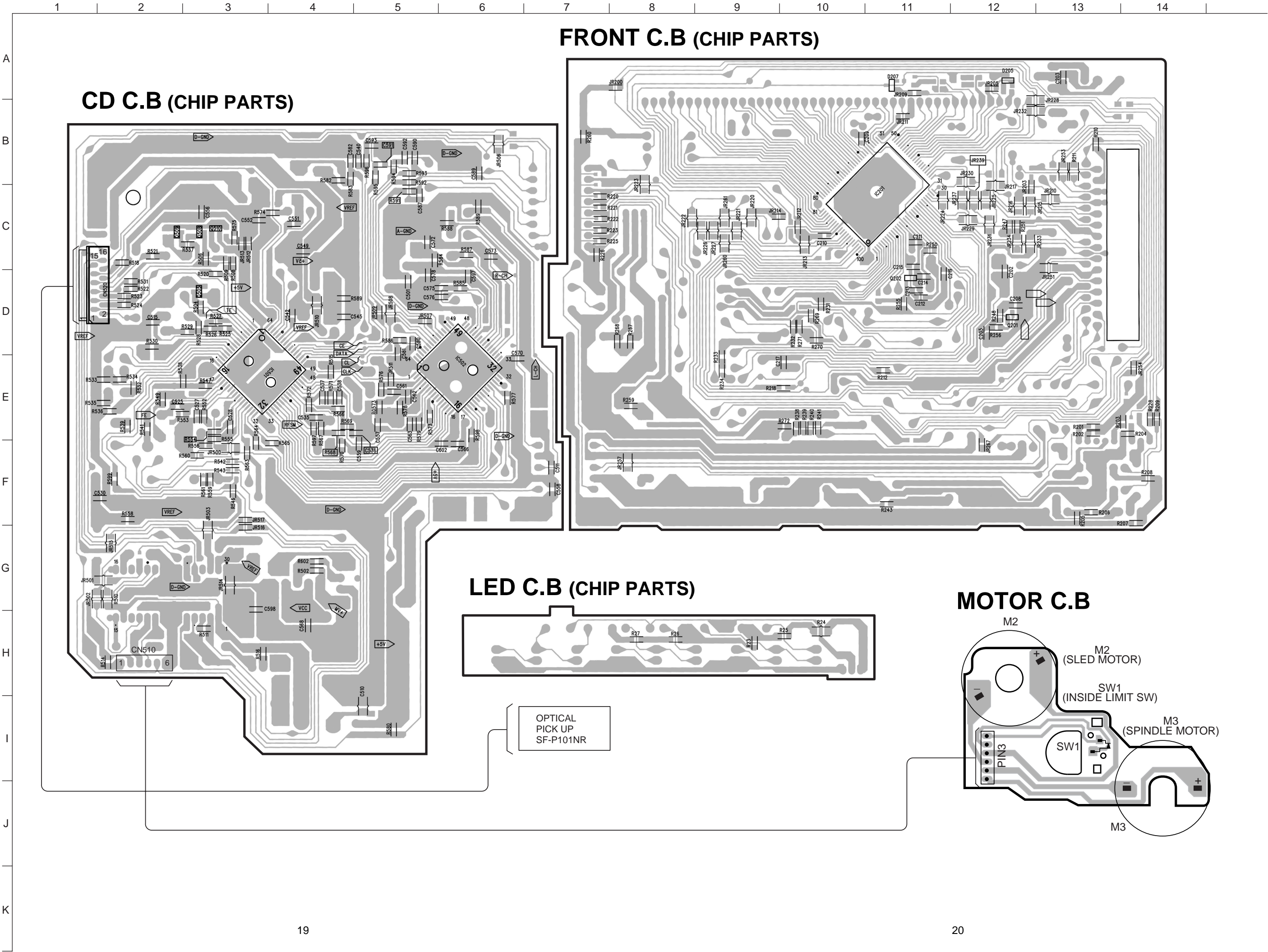


SCHEMATIC DIAGRAM-1 (MAIN 1/2)

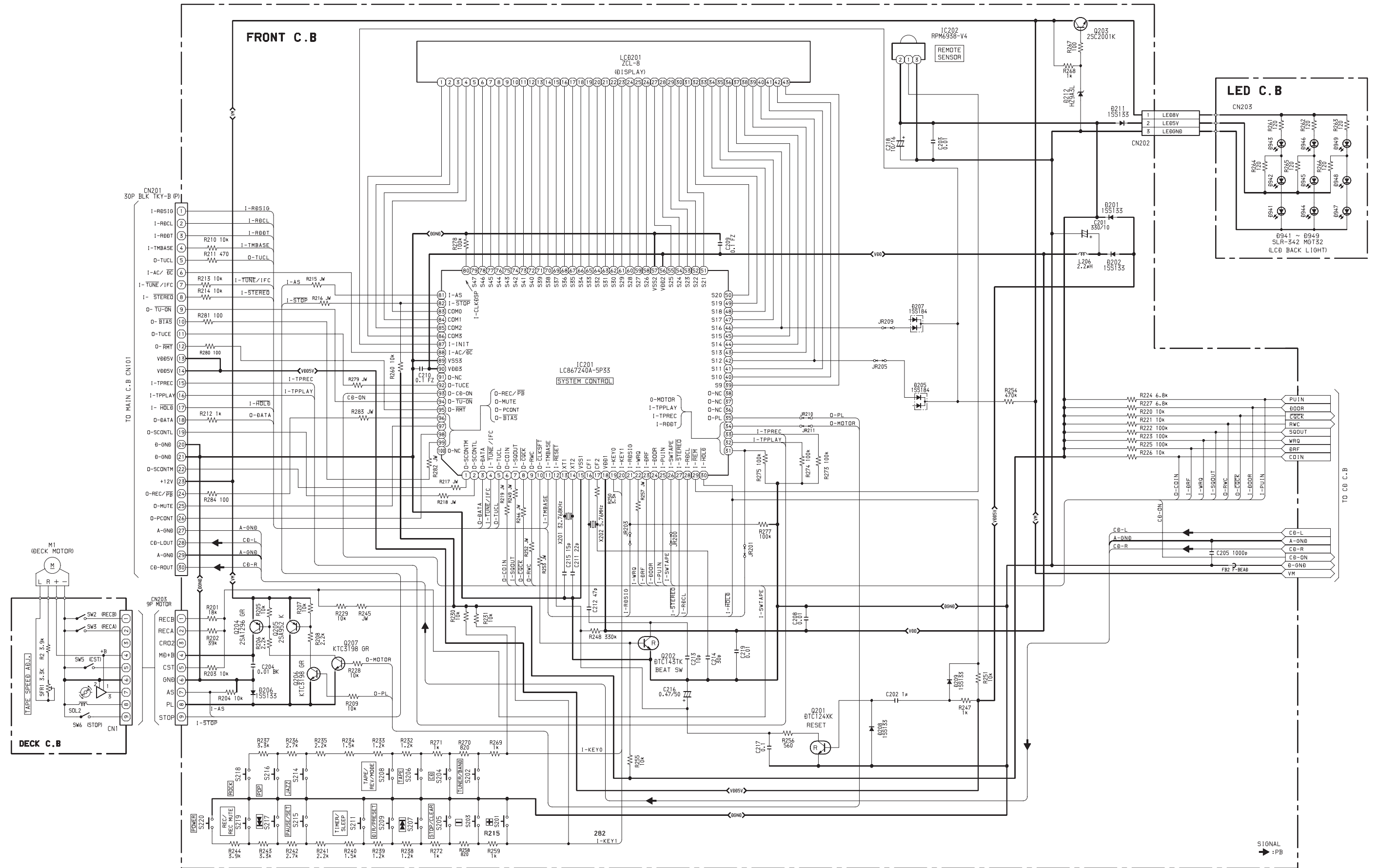


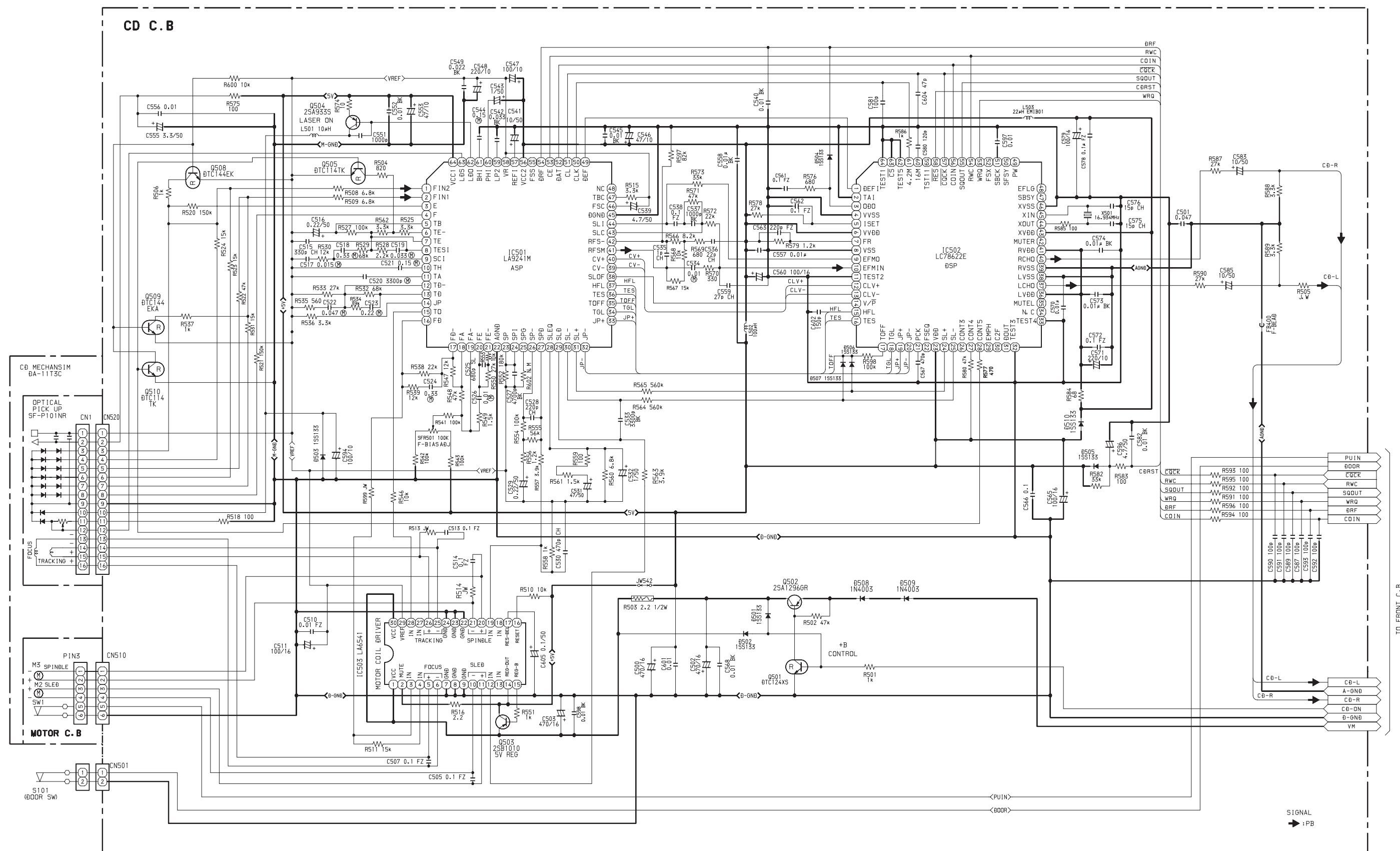






SCHEMATIC DIAGRAM-3 (FRONT)





VOLTAGE CHART

IC101 TDA2007A (V)

PIN	1	2	3	4	5	6	7	8	9
TU	1.4	0.7	10	0.74	1.4	GN	8.7	18.2	8.8
CD	1.4	0.7	10	0.72	1.4	GN	8.7	18.2	8.8

IC102 M62495AFP (V)

PIN	1	2	3	4	5	6	7	8	9	10	11	12
TU	2.4	2.4	2.4	2.39	NC	2.4	2.4	2.39	2.4	2.4	2.4	5.34
TAPE	2.4	2.4	2.4	2.38	NC	2.4	2.4	2.38	2.4	2.4	2.4	5.33
CD	2.4	2.4	2.4	2.35	NC	2.4	2.4	2.35	2.4	2.4	2.4	5.29
PIN	13	14	15	16	17	18	19	20	21	22	23	24
TU	2.5	GN	2.4	2.42	2.4	2.4	2.4	NC	2.4	2.4	2.4	2.4
TAPE	2.5	GN	2.4	2.4	2.4	2.4	2.4	NC	2.4	2.4	2.4	2.4
CD	2.5	GN	2.4	2.4	2.4	2.4	2.4	NC	2.4	2.4	2.4	2.4

IC301 BA4560 (V)

PIN	1	2	3	4	5	6	7	8
TAPE	4.2	4.5	4.2	GND	4.2	4.2	4.2	8.69
REC	4.2	4.2	4.1	GND	4.1	4.2	4.2	8.68

IC302 BA4560 (V)

PIN	1	2	3	4	5	6	7	8
TAPE	4.2	4.5	4.2	GND	4.2	4.2	4.2	8.69
REC	4.2	4.2	4.1	GND	4.1	4.2	4.2	8.68

IC721 LC72131D PLL (V)

PIN	1	2	3	4	5	6	7	8	9	10	11
FM	2.7	0	2.5	0.96	1	5.5	2	0	0.8	0	0
MW	2.7	0	0	0	0	5.5	2	0	9.1	0	0
LW	2.7	0	0	0	0	5.5	2	0	9.3	9.4	0
PIN	12	13	14	15	16	17	18	19	20	21	22
FM	0	9.1	NC	7.7	2.1	0	0	0	0	0	2.7
MW	0	9.2	NC	2.7	0	5.5	0.9	0.91	4.3	0	2.7
LW	0	9.3	NC	2.71	0	5.5	0.9	0.99	1.3	0	2.7

IC771 LA1837NL (V)

PIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
FM	3.6	9.1	3.6	3.56	GN	0	0	9.09	9.1	1.3	2.5	0	0.5	8	8
MW	3.6	9.3	3.5	3.54	GN	9.2	5.5	9.31	9.3	1.3	0	0	0.5	5	5.6
LW	3.6	9.4	3.6	3.54	GN	9.3	5.5	9.43	9.4	1.3	0	0.79	0.5	5.1	5.7
PIN	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
FM	4.3	4.3	4.3	4.29	3.4	3.4	2.8	3.54	0	0	3.6	3.6	3.6	3.6	2.2
MW	4.3	4.3	4.3	4.27	3.4	3.4	2.8	2.7	0.7	0.7	3.6	3.54	3.6	3.6	2
LW	4.3	4.3	4.3	4.28	3.4	3.4	2.8	2.58	0.9	0.8	3.6	3.54	3.6	3.6	2

FM FFE801 (V)

PIN	1	2	3	4	5	6	7	8
FM	0	GN	0	VT	7.1	GN	0	0
MW	0	GN	0	VT	0	GN	0	0

IC501 LA9241M CD (V)

PIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
dynamics	2.5	2.5	2.6	2.55	2.5	2.5	2.5	2.54	2.5	2.5	2.5	2.52	2.6	2.5	2.6
stafics	2.5	2.5	2.5	2.52	2.5	2.5	2.5	2.51	2.5	2.5	2.5	2.51	2.5	2.5	2.5
PIN	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
dynamics	2.6	2.5	2.5	2.54	2.6	2.5	GN	2.51	2.5	2.5	2.5	2.6	2.5	2.6	2.4
stafics	2.5	2.5	0	2.49	2.5	2.5	GN	0	0	2.5	2.5	2.51	2.5	2.5	2.3
PIN	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
dynamics	2.4	0	0	4.99	0	1.2	0	0	0	0	2.3	2.43	2.6	2.5	GN
stafics	2.3	0	0	4.94	4.8	0	0	4.92	0	0	1.6	2.4	2.6	2.5	GN
PIN	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
dynamics	2.5	2.6	NC	0	2.4	4.7	4.8	0	4.9	NC	5	2.53	2.5	2.3	2.4
stafics	2.5	2.5	NC	0	0	0	4.8	0	0	NC	0	2.51	2.5	1	1
PIN	61	62	63	64											
dynamics	2.2	3.6	0	0											
stafics	2.2	4.3	0	0											

IC502 LC78622E CD (V)

PIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
dynamics	0	0	1.5	0	2	4.9	0.3	0	2.7	2.6	0	0	0	0	0
stafics	0	0	0	0	2	4.9	0	0	2.5	2.6	0	0	0	4.9	0
PIN	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
dynamics	1.8	0	5	0	0	2.5	NC	4.19	0	0	NC	4.98	0	NC	NC
stafics	0	4.9	4.9	0	0	2.5	NC	4.95	0	0	NC	4.93	0	NC	NC
PIN	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
dynamics	2.5	0	0	NC	NC	4.9	2.1	0	0	2.1	4.9	NC	5	2	2.5
stafics	0	0	0	NC	NC	4.8	2.1	0	0	2.1	4.8	NC	5	2	2.2
PIN	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
dynamics	0	NC	NC	NC	NC	0	NC	0.75	0	0	4.8	4.6	5	NC	2
stafics	0	NC	NC	NC	NC	0	NC	0	0	0	4.8	4.77	5	NC	2
PIN	61	62	63	64											
dynamics	2.4	0	0	0											
stafics	235	0	0	0											

C503 LA6541 CD (V)

PIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
dynamics	9.9	5	2.5	2.52	4.6	4.5	GN	GN	GN	4.5	4.6	2.52	NC	5	9.3
stafics	10	5	2.5	2.51	4.7	4.7	GN	GN	GN	4.7	4.7	2.51	NC	5	9.5
PIN	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
dynamics	5	4.9	NC	2.53	4.9	4	GN	GN	GN	4.5	4.5	NC	2.5	2.5	9.8
stafics	4.9	4.8	NC	2.51	4.7	4.6	GN	GN	GN	4.7	4.7	NC	2.5	2.5	10

IC201 LC867240A-5P33 CPU (V)

PIN	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
TU	0	0	0	0	0	0	0.8	0	0	0	1.9	4.67	1.8	2.6	0
TAPE	0	0	0	0	0	0	0	0	0	2	1.9	4.6	1.6	2.7	0
CD	0	0	0	0	0	4.8	0	4.65	0	2	1.9	4.63	1.6	2.6	0
PIN	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
TU	2.2	2.3	4.8	4.91	4.9	2.4	0.8	0.96	4.9	0	4.9	0	0.6	4.9	5.3
TAPE	2.3	2.3	4.8	4.91	4.9	0	0.8	0.96	4.9	0.5	1.8	0	0	4.9	5.3
CD	2.2	2.3	4.8	4.88	4.9	0	0.8	0.91	4.9	1.9	2.4	0	0	4.9	5.3
PIN	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
TU	0.5	0	0	0	0	0	0	2.5	2.4	2.4	2.4	2.49	2.4	2.5	2.5
TAPE	0	0	0	4.73	0	0	0	2.46	2.5	2.4	2.4	2.46	2.4	2.4	2.4
CD	0	0	0	0	0	0	0	2.34	2.3	2.3	2.3	2.33	2.3	2.3	2.3
PIN	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
TU	2.4	2.5	2.5	2.49	2.5	2.5	2.5	2.5	2.5	2.4	4.8	0	2.4	2.4	2.4
TAPE	2.4	2.4	2.4	2.43	2.4	2.4	1.7	1.9	2.5	2.4	4.8	0	2.4	2.4	2.4
CD	2.3	2.3	2.3	2.32	2.4	2.5	2.3	2.33	2.3	2.3	4.8	0	2.3	2.3	2.3
PIN	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
TU	2.5	2.5	2.5	2.47	2.4	2.4	2.4	2.4	2.4	2.4	2.5	2.47	2.4	2.5	2.5
TAPE	2.5	2.4	2.4	2.43	2.4	2.4	2.5	2.42	2.4	2.4	2.4	2.43	2.4	2.5	2.5
CD	2.3	2.4	2.3	2.34	2.4	2.4	2.3	2.34	2.4	2.4	2.3	2.35	2.4	2.3	2.3
PIN	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
TU	2.5	2.5	2.5	2.48	0	0	4.9	2.48	2.5	2.5	2.5	2.94	5.3	0	4.8
TAPE	2.5	2.5	2.5	2.46	0	0	0	2.45	2.5	2.5	2.5	3.54	5.3	0	4.8
CD	2.4	2.4	2.4	2.36	0	0	4.8	2.4	2.4	2.4	2.4	2.05	5.3	0	4.8
PIN	91	92	93	94	95	96	97	98	99	100					
TU	0	0	0	0	0	0	0	0.98	4.8	0					
TAPE	0	0	0	4.75	0	0	0	0.99	4.7	0					
CD	0	0	4.7	4.72	0	0	0	1.12	4.7	0					

Q101	KTC3198GR			Q102	KTC3198GR			Q103	2SB1370			Q105	C3198GR		
PIN	B	E	C	PIN	B	E	C	PIN	B	E	C	PIN	B	E	C
dynamics	0.7	0	0	dynamics	0	0	5.3	dynamics	12	19	18	dynamics	0.7	0	18
stafics(v)	0.7	0	0	stafics(v)	0	0	5.3	stafics(v)	12	19	28	stafics(v)	0.6	0	18

Q106	KTC3198GR			Q107	KTC3198GR			Q108	2SD1381F			Q104	2SB1370E		
PIN	B	E	C	PIN	B	E	C	PIN	B	E	C	PIN	B	E	C
dynamics	0.7	GN	1	TAPE	12	11	12	TU (V)	6.2	5.6	16	dynamics	18	19	18
stafics(v)	0.7	GN	91	CD (V)	12	12	11	CD (V)	6.2	5.6	16	stafics(v)	18	19	18

Q112	KTA1266GR			Q113	DTC144ES			Q109	DTC343TS			Q110	DTC343TS		
PIN	B	E	C	PIN	B	E	C	PIN	B	E	C	PIN	B	E	C
dynamics	17	18	18	dynamics	7.1	0	0	dynamics	0	0	0	dynamics	0	0	0
stafics(v)	17	18	18	stafics(v)	7.1	0	0	stafics(v)	1.4	0	0	stafics(v)	1.4	0	0

Q111	2SC1815Y			Q300	KTC3198GR			Q301	2SJ460			Q302	2SJ460		
PIN	B	E	C	PIN	B	E	C	PIN	B	E	C	PIN	B	E	C
TU(V)	0	0	10	PB(V)	0	0	7.2	PB(V)	7	4	4.2	PB(V)	7	4.2	4
CD(V)	0.7	0	0	REC(V)	0.7	0	0	REC(V)	0	4.1	4.1	REC(V)	0	4.1	4.1

Q303	2SK2541			Q304	2SK2541			Q305	2SA1993F			Q306	DTC144ES		
PIN	B	E	C	PIN	B	E	C	PIN	B	E	C	PIN	B	E	C
PB(V)	7	4.2	4.2	PB(V)	7	4.2	4.2	PB(V)	3.5	4.2	4.2	PB(V)	7.2	0	0
REC(V)	0	4.2	4.1	REC(V)	0	4.2	4.1	REC(V)	17	9.2	4.2	REC(V)	0	0	16

Q307	2SA1993F			Q308	2SA1993F			Q309	2SA1993			Q310	2SA1993F		
PIN	B	E	C	PIN	B	E	C	PIN	B	E	C	PIN	B	E	C
PB(V)	3.6	4.2	4.2	PB(V)	3.6	4.2	4.2	PB(V)	7.2	4.2	4.2	PB(V)	7.2	4.2	4.2
REC(V)	17	4.5	9.2	REC(V)	17	4.5	9.2	REC(V)	4.2	3.6	4.2	REC(V)	4.2	3.6	4.2

Q311	2SA1993F			Q313	KTC1898GR			Q314	2SC3331T			Q315	2SC3331T		
PIN	B	E	C	PIN	B	E	C	PIN	B	E	C	PIN	B	E	C
PB(V)	8.7	4.2	4.2	PB(V)	0.5	4.2	0	PB(V)	0	0	0	PB(V)	0	0	0
REC(V)	3.6	4.2	4.2	REC(V)	2.3	4.2	1.7	REC(V)	0.7	0.7	6.2	REC(V)	0.8	0.7	6.3

Q316	2SC3331T			Q317	KTC1898GR			Q318	KTC3198GR			Q204	2SA1296GR		
PIN	B	E	C	PIN	B	E	C	PIN	B	E	C	PIN	B	E	C
PB(V)	0	0	11	PB(V)	0.7	0	0	PB(V)	0	0	8.7	PB(V)	11	12	12
REC(V)	7.4	6.6	8.5	REC(V)	0	0	7.5	REC(V)	0.7	0	0	REC(V)	11	12	12

Q205	2SA952K			Q206	KTC3198GR			Q207	KTC3198GR			Q201	DTC124XK		
PIN	B	E	C	PIN	B	E	C	PIN	B	E	C	PIN	B	E	C
PB(V)	0	12	12	PB(V)	0	0	12	PB(V)	0.7	0	0	CD(V)	0	0	4.7
REC(V)	12	12	0	REC(V)	0	0	12	REC(V)	0.7	0	0	TU(V)	0	0	4.7

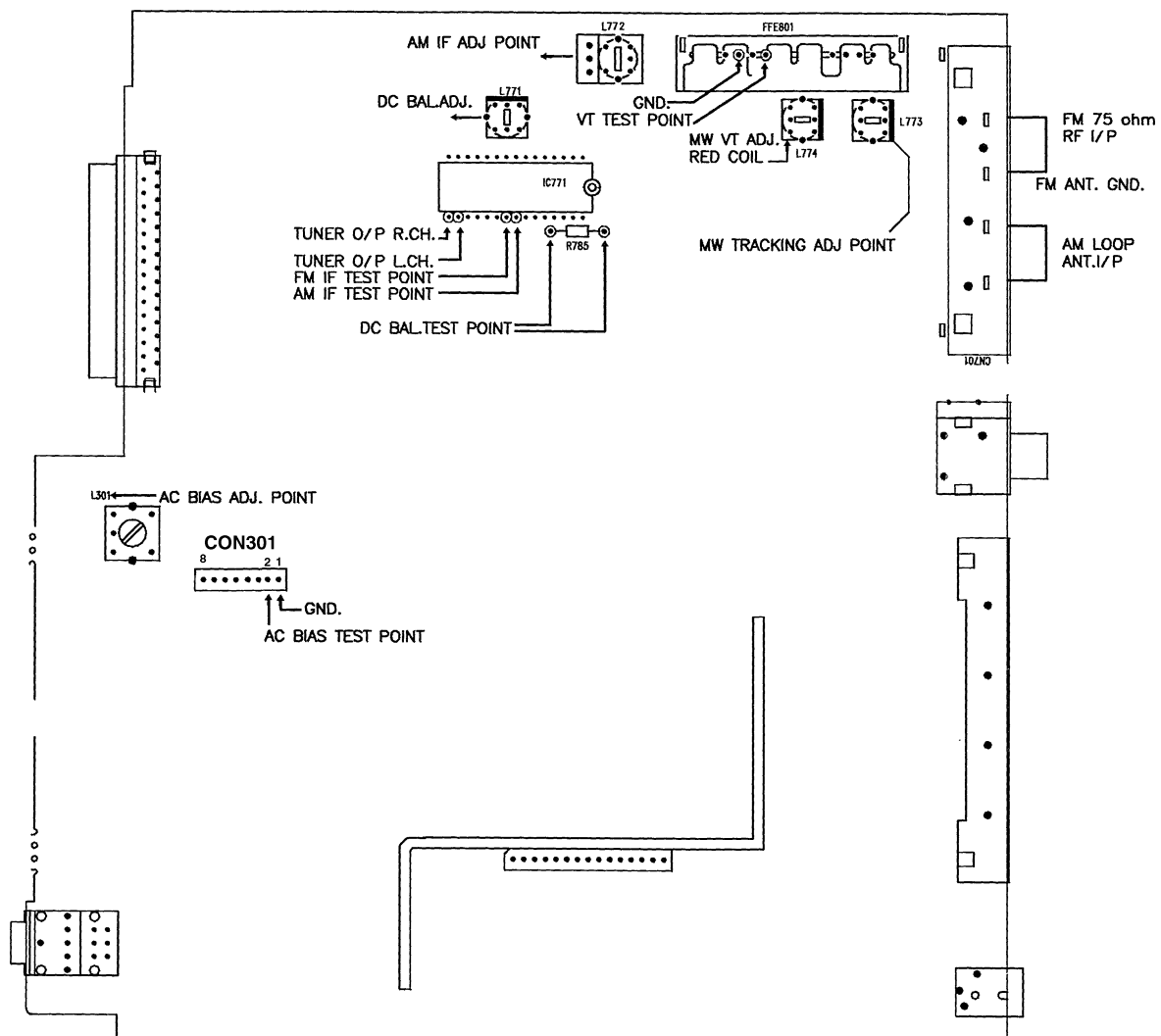
Q202	DTC143TK			Q203	2SC2001K			Q711	C4115			Q853	2SC3052		
PIN	B	E	C	PIN	B	E	C	PIN	B	E	C	PIN	B	E	C
CD(V)	2	0	0	CD(V)	8.4	7.7	12	CD(V)	0	0	12				
TU(V)	0	0	0.5	TU(V)	8.4	7.7	12	TU(V)	9.8	9.1	12				

Q805	2SC2714			Q806	RTIP144C			Q501	DTC124XS			Q502	2SA1296GR		
PIN	B	E	C	PIN	B	E	C	PIN	B	E	C	PIN	B	E	C
FM(V)	5.2	4.5	7.2	FM(V)	0.8	9.1	9	dynamics	4.5	0	0.2	dynamics	9.6	10	10
AM(V)	5.4	4.2	7.3	AM(V)	0	9.3	0	stafics(v)	4.5	0	0.2	stafics(v)	9.5	10	10

Q503	2SA1296GR			Q504	2SA933RS			Q505	DTC114TK			Q508	DTC144EK		
PIN	B	E	C	PIN	B	E	C	PIN	B	E	C	PIN	B	E	C
dynamics	9.8	10	5	dynamics	4.2	4.8	1.6	dynamics	0.1	2.5	2.5	dynamics	4.3	2.5	2.5
stafics(v)	9.7	10	5.2	stafics(v)	3.7	4.4	2.1	stafics(v)	0.1	2.5	2.5	stafics(v)	4.4	2.5	2.5

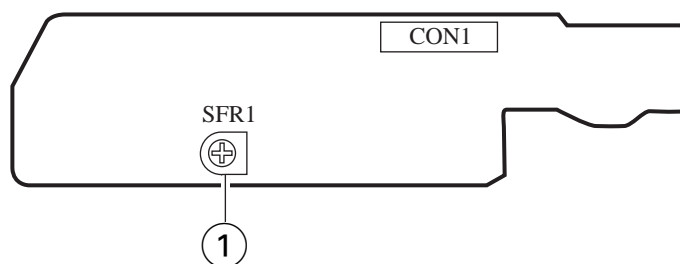
Q509	DTC144EK			Q510	DTC114TK		
PIN	B	E	C	PIN	B	E	C
dynamics	4.3	2.5	2.5	dynamics	0.1	0	4.3
stafics(v)	4.4	2.5	2.5	stafics(v)	0.1	0	4.4

ELECTRICAL ADJUSTMENT

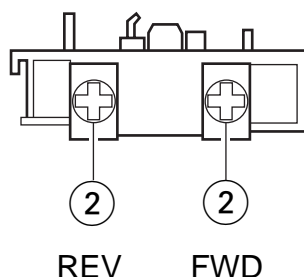


ADJUSTMENT ITEM	ADJ. POINT	TEST POINT	SET FREQ.	SETTING
MW VT ADJ.	L774	FFE801 4PIN TO GND.	1602KHz	6.8V \pm 0.1V
MW VT CHECK	-	FFE801 4PIN TO GND.	531KHz	\leq 2.0V
MW TRACKING ADJ.	L773	TUNER O/P L/R	603KHz	MAX. Output Sine Wave (Min. Dist.)
FM VT ADJ.	-	FFE801 4PIN TO GND.	108 MHz	\leq 8V
FM VT CHECK	-	FFE801 4PIN TO GND.	87.5MHz	\leq 2.5V
DC BAL. ADJ.	L771	Both Terminal OF R785	98 MHz	0 mv (\pm 20 mv)
FM IF CHECK	-	IC 771 PIN 22	10.7 MHz	-
AM IF ADJ.	L772	IC 771 PIN 24	450 KHz	-

DECK C.B



DECK R/P/E HEAD



< DECK SECTION >

1. Tape Speed Adjustment

Settings:

 - Test tape: TTA-100
 - Test point: SP-OUT 2V
 - Adjustment location: SFR1

Method: Play back the test tape and adjust SFR1 for $3000\text{Hz} \pm 5\text{Hz}$ (FWD) and FWD PLAY speed $\pm 45\text{Hz}$ (REV).
2. Head Azimuth Adjustment

Settings:

 - Test tape: TTA-300
 - Test point: SP-OUT 2V
 - Adjustment location: Head azimuth adjustment screw

Method: Play back the 8kHz signal of the test tape and adjust screw so that the output becomes maximum. Next, Perform on each FWD PLAY and REV PLAY mode.
3. PB Frequency Response Check

Settings:

 - Test tape: TTA-320
 - Test point: SP-OUT 2V

Method: Play back the 315Hz and 10kHz signals of the test tape and check that the 10kHz signal with respect to that of the 315Hz signal is $0\text{dB} \pm 3\text{dB}$.
4. REC/PB Frequency Response Check

Settings:

 - Test tape: TTA-602
 - Test point: SP-OUT 2V

Method: Input a-20VU signal to the AUX terminal. Record the 1kHz and 10kHz signals on the test tape and play back them. Check that the difference between the record level and the play back level at 1kHz and 10kHz signal is 0dB to $\pm 3\text{dB}$.

PRACTICAL SERVICE FIGURE

< TUNER SECTION >

< FM SECTION >

IHF Sensitivity:	15dB \pm 5dB (at 90.0MHz)
(THD 3%)	14dB \pm 5dB (at 98.0/106.0MHz)
Signal to noise ratio:	More than 60dB
(Input 54dB)	(at 98.0MHz)
Distortion:	Less than 1.2%
(Input 54dB)	(at 98.0MHz)
Auto stop level:	25 \pm 10dB (at 98.0MHz)
Stereo separation:	More than 20dB (at 98.0MHz)
Intermediate frequency:	10.75MHz

< AM (MW) SECTION >

Sensitivity:	46 \pm 5dB (at 600kHz)
(S/N 10dB)	44 \pm 5dB (at 1000kHz)
	42 \pm 5dB (at 1400kHz)
Signal to noise ratio:	More than 33dB
(Input 74dB)	(at 999kHz)
Distortion:	Less than 3.0%
(Input 74dB)	(at 999kHz)
Auto stop level:	50+10/-15dB (at 1000kHz)
Intermediate frequency:	450kHz

< DECK SECTION >

Tape speed:	3000Hz \pm 45%
Wow & flutter:	Less than 0.14% (W.R.M.S)
Pinch roller pressure:	270-330g
Take-up torque:	30-55g-cm (FWD, REV)
FF & REW torque:	75-180g-cm
Back tension:	2-7g-cm (FWD, REV)
Distortion:	Less than 3.0% (REC/PB, 0VU)
Noise level:	Less than 80mV (PB, REC/PB, FILTER DIN AUDIO)
Erasing ratio:	More than 55dB (at 125Hz, +10VU)
Test tape:	TTA-100
	TTA-602 (NORMAL)

IC DESCRIPTION

IC, LC867240A-5P33

Pin No.	Pin Name	I/O	Description
1	O-SCONTM	O	M62439SP control. open drain output.
2	O-SCONTL	O	
3	O-DATA	O	Tuner control. CMOS output.
4	I-TUNE/IFC	I	Tuner control.
5	O-TUCL	O	Tuner control. CMOS output.
6	O-COIN	O	CD control. open drain output.
7	I-SQOUT	I	CD control.
8	O-CQCK	O	CD control. open drain output.
9	O-RWC	O	
10	O-CLKSFT	O	Clock shift output. "L" during shift. open drain output.
11	I-TMBASE	I	8 Hz time base input.
12	I-RESET	I	Reset input.
13	XT1	I	Input pin.
14	XT2	O	Output pin for 32.768kHz crystal oscillation.
15	VSS1	—	GND.
16, 17	CF1, CF2	I/O	Main clock input/output 5.76 MHz.
18	VDD1	—	+5V.
19	I-KEY0	I	KEY0 A/D input.
20	I-KEY1	I	KEY1 A/D input.
21	I-RDSIG	I	RDS signal level input. (A/D input)
22	I-WRQ	I	CD control.
23	I-DRF	I	
24	I-DOOR	I	CD door SW detection SW input. "L" at CLOSE.
25	I-PUIN	I	CD pick-up detection SW input. "L" at ON.
26	I-SWTAPE	I	Tape detection SW input. (A/D input)
27	I-STEREO	I	Monoaural/stereo indication selector input. "L" at stereo.
28	I-RDCL	I	RDS clock input.
29	I-REM	I	Remote control input. (fall-down edge interrupt input)
30	I-HOLD	I	Hold mode detection. "L" at hold mode.
31	I-RDDT	I	RDS data input.
32	I-TPREC	I	Tape REC detection input. "H" at REC.
33	I-TPPLAY	I	Tape PLAY detection input. "H" at PLAY.
34	O-MOTOR	O	Mechanism deck motor ON/OFF output. "H" at ON. CMOS output.
35	O-PL	O	Mechanism deck plunger solenoid ON/OFF output. "H" at ON. CMOS output .
36-38	O-NC	O	Not used.
39-55	S9-S25	O	LCD SEG terminal Initial setting output. (S10 to S16)
56	VDD2	—	+5V.
57	VSS2	—	GND.
58-79	S26-S47	O	LCD SEG terminal .
80	I-CLKDSP	I	Watch indication select input "L": 12H. "H": 24H.
81	I-AS	I	Auto stop. counter input .

Pin No.	Pin Name	I/O	Description
82	I-STOP	I	Tape stop input.
83-86	COM0-COM3	O	LCD common output.
87	I-INIT	I	Initial setting input.
88	I-AC/DC	O	Beat selector output. “H” during selection. CMOS output .
89	VSS3	—	GND.
90	VDD3	—	5V.
91	O-NC	O	Not used.
92	O-TUCE	O	Tuner chip enable output. CMOS output .
93	O-CD-ON	O	“H” output during CD function. CMOS output.
94	O-TU-ON	O	“H” output during TU function. Open drain output.
95	O-RMT	O	REC mute output. “H” during mute. Open drain output.
96	O-REC/PB	O	REC/PB select output. “H” during PB. Open drain output.
97	O-MUTE	O	Mute output. “H” during mute. Open drain output.
98	O-PCONT	O	Power control output. “H” at ON. CMOS output.
99	O-BIAS	O	REC bias ON/OFF output. “H” at ON. Open drain output.
100	O-NC	O	Not used.

IC, LA9241ML

Pin No.	Pin Name	I/O	Description
1	FIN2	I	Pin to which external pickup photo diode is connected. RF signal is created by adding with the FIN1 pin signal. FE signal is created by subtracting from the FIN1 pin signal.
2	FIN1	I	Pin to which external pickup photo diode is connected.
3	E	I	Pin to which external pickup photo diode is connected. TE signal is created by subtracting from the F pin signal.
4	F	I	Pin to which external pickup photo diode is connected.
5	TB	I	DC component of the TE signal is input.
6	TE–	I	Pin to which external resistor setting the TE signal gain is connected between the TE pin.
7	TE	O	TE signal output pin.
8	TESI	I	TES “Track Error Sense” comparator input pin. TE signal is passed through a band-pass filter then input.
9	SCI	I	Shock detection signal input pin.
10	TH	I	Tracking gain time constant setting pin.
11	TA	O	TA amplifier output pin.
12	TD–	I	Pin to which external tracking phase compensation constants are connected between the TD and VR pins.
13	TD	I	Tracking phase compensation setting pin.
14	JP	I	Tracking jump signal (kick pulse) amplitude setting pin.
15	TO	O	Tracking control signal output pin.
16	FD	O	Focusing control signal output pin.
17	FD–	I	Pin to which external focusing phase compensation constants are connected between the FD and FA pins.
18	FA	I	Pin to which external focusing phase compensation constants are connected between the FD– and FA– pins.
19	FA–	I	Pin to which external focusing phase compensation constants are connected between the FA and FE pins.
20	FE	O	FE signal output pin.
21	FE–	I	Pin to which external FE signal gain setting resistor is connected between the FE pin.
22	AGND	—	Analog signal GND.
23	SP	—	Single ended output of the CV+ and CV– pin input signal.
24	SPI	O	Spindle amp input.
25	SPG	I	Pin to which external spindle gain setting resistor in 12 cm mode is connected.
26	SP–	I	Pin to which external spindle phase compensation constants are connected together with SPD pin.
27	SPD	O	Spindle control signal output pin.
28	SLEQ	I	Pin to which external sled phase compensation constants are connected.
29	SLD	O	Sled control signal output pin.
30, 31	SL–, SL+	I	Sled advance signal input pin from microprocessor.
32, 33	JP–, JP+	I	Tracking jump signal input pin from DSP.
34	TGL	I	Tracking gain control signal input from DSP. Low gain when TGL = H.
35	TOFF	I	Tracking off control signal input pin from DSP. Off when TOFF = H.

Pin No.	Pin Name	I/O	Description
36	TES	O	Pin from which TES signal is output to DSP.
37	HFL	O	“High Frequency Level” is used to judge whether the main beam position is on top of bit or on top of mirror.
38	SLOF	I	Sled servo off control input pin.
39, 40	CV–, CV+	I	CLV error signal input pin from DSP.
41	RFSM	O	RF output pin.
42	RFS–	I	RF gain setting and EFM signal 3T compensation constant setting pin together with RFSM pin.
43	SLC	O	“Slice Level Control” is the output pin which controls the RF signal data slice level by DSP.
44	SLI	I	Input pin which control the data slice level by the DSP.
45	DGND	—	Digital system GND.
46	FSC	O	Output pin to which external focus search smoothing capacitor is connected.
47	TBC	I	“Tracking Balance Control” EF balance variable range setting pin.
48	NC	—	No connection.
49	DEF	O	Disc defect detector output pin.
50	CLK	I	Reference clock input pin. 4.23 MHz of the DSP is input.
51	CL	I	Microprocessor command clock input pin.
52	DAT	I	Microprocessor command data input pin.
53	CE	I	Microprocessor command chip enable input pin.
54	DRF	O	“Detect RF” RF level detector output.
55	FSS	I	“Focus Search Select” focus search mode (\pm search/+ search) select pin.
56	VCC2	—	Servo system and digital system Vcc pin.
57	REFI	—	Pin to which external bypass capacitor for reference voltage is connected.
58	VR	O	Reference voltage output pin.
59	LF2	I	Disc defect detector time constant setting pin.
60	PH1	I	Pin to which external capacitor for RF signal peak holding is connected.
61	BH1	I	Pin to which external capacitor for RF signal bottom holding is connected.
62	LDD	O	APC circuit output pin.
63	LDS	I	APC circuit input pin.
64	VCC1	—	RF system Vcc pin.

IC, LC78622E

Pin No.	Pin Name	I/O	Description	
1	DEFI	I	Defect sense signal (DEF) input pin. (Connect to 0V when not used).	
2	TAI	I	For PLL.	Test signal input pin with built-in pull-down resistor. Be sure to connect to 0V.
3	PDO	O		Phase comparator output pin to control external VCO.
4	VVSS	—		GND pin for built-in VCO. Be sure to connect to 0V.
5	ISSET	I		Pin to which external resistor adjusting the PDO output current.
6	VVDD	—		Power supply pin for built-in VCO.
7	FR	I		Pin for VCO frequency range adjustment.
8	VSS	—	Digital system GND. Be sure to connect to 0V.	
9	EFMO	O	For slice level control.	EFM signal output pin.
10	EFMIN	I		EFM signal input pin.
11	TEST2	I	Test signal input pin with built-in pull-down resistor. Be sure to connect to 0V.	
12, 13	CLV+, CLV–	O	Disc motor control output. Three level output is possible using command.	
14	V/P	O	Rough servo or phase control automatic selection monitoring output pin. Rough servo at H. Phase servo at L.	
15	HFL	I	Track detect signal input pin. Schmidt input.	
16	TES	I	Tracking error signal input pin. Schmidt input.	
17	TOFF	O	Tracking OFF output pin.	
18	TGL	O	Tracking gain selection output pin. Gain boost at L.	
19, 20	JP+, JP–	O	Track jump control signal output pin. Three level output is possible using command.	
21	PCK	O	EFM data playback clock monitoring pin 4.3218 MHz when phase is locked in.	
22	FSEQ	O	Sync signal detection output pin. H when the sync signal which is detected from EFM signal and the sync signal which is internally generated agree.	
23	VDD	—	Digital system power supply pin.	
24-28	SL+ - PUIN	I/O	General purpose input/output pin 1 to 5.	The pin is controlled by the serial data command from microprocessor. When the pin is not used, set the pin to the input terminal and connect to 0V, or alternately set the pin to output terminal and leave the pin open.
29	EMPH	O	De-emphasis monitor output pin. De-emphasis disc is being played back at H.	
30	C2F	O	C2 flag output pin.	
31	DOUT	O	DIGITAL OUT output pin. (EIAJ format).	
32, 33	TEST3, TEST4	I	Test signal input pin with built-in pull-down resistor. Be sure to connect to 0V.	
34	N.C.	—	Not used. Set the pin to open.	
35	MUTEL	O	L-channel 1-bit DAC.	L-channel mute output pin.
36	LVDD	—		L-channel power supply pin.
37	LCHO	O		L-channel output pin.
38	LVSS	—		L-channel GND. Be sure to connect to 0V.
39	RVSS	—	R-channel 1-bit DAC.	R-channel GND. Be sure to connect to 0V.
40	RCHO	O		R-channel output pin.
41	RVDD	—		R-channel power supply pin.
42	MUTER	O		R-channel mute output pin.

Pin No.	Pin Name	I/O	Description
43	XVDD	—	Crystal oscillator power supply pin.
44	XOUT	O	Pin to which external 16.9344 MHz crystal oscillator is connected.
45	XIN	I	
46	XVSS	—	Crystal oscillator GND pin. Be sure to connect to 0V.
47	SBSY	O	Subcode block sync signal output pin.
48	EFLG	O	C1, C2, single and dual correction monitoring pin.
49	PW	O	Subcode P, Q, R, S, T, U and W output pin.
50	SFSY	O	Subcode frame sync signal output pin. Falls down when subcode enters standby.
51	SBCK	I	Subcode read clock input pin. Schmidt input. (Be sure to connected to 0V when not in use.)
52	FSX	O	Pin outputting the 7.35 kHz sync signal which is generated by dividing frequency of crystal oscillator.
53	WRQ	O	Subcode Q output standby output pin.
54	RWC	I	Read/write control input pin. Schmidt input.
55	SQOUT	O	Subcode Q output pin.
56	COIN	I	Command input pin from microprocessor.
57	$\overline{\text{CQCK}}$	I	Command input read clock or subcode read input clock from SQOUT pin
58	$\overline{\text{RES}}$	I	LC78622 reset input pin. Set this pin to L once when the main power is turned on.
59	TST11	O	Test signal output pin. Use this pin as open (normally L output).
60	16M	O	16.9344 MHz output pin.
61	4.2M	O	4.2336 MHz output pin.
62	TEST5	I	Test signal input pin with built-in pull-down resistor. Be sure to connect to 0V.
63	$\overline{\text{CS}}$	I	Chip select signal input pin with built-in pull-down resistor. Be sure to connect to 0V while it is not controlling.
64	TEST1	I	Test signal input pin without built-in pull-down resistor. Be sure to connect to 0V.

Note: The same potential must be applied to the respective power supply terminals. (VDD, VVDD, LVDD, RVDD, XVDD)

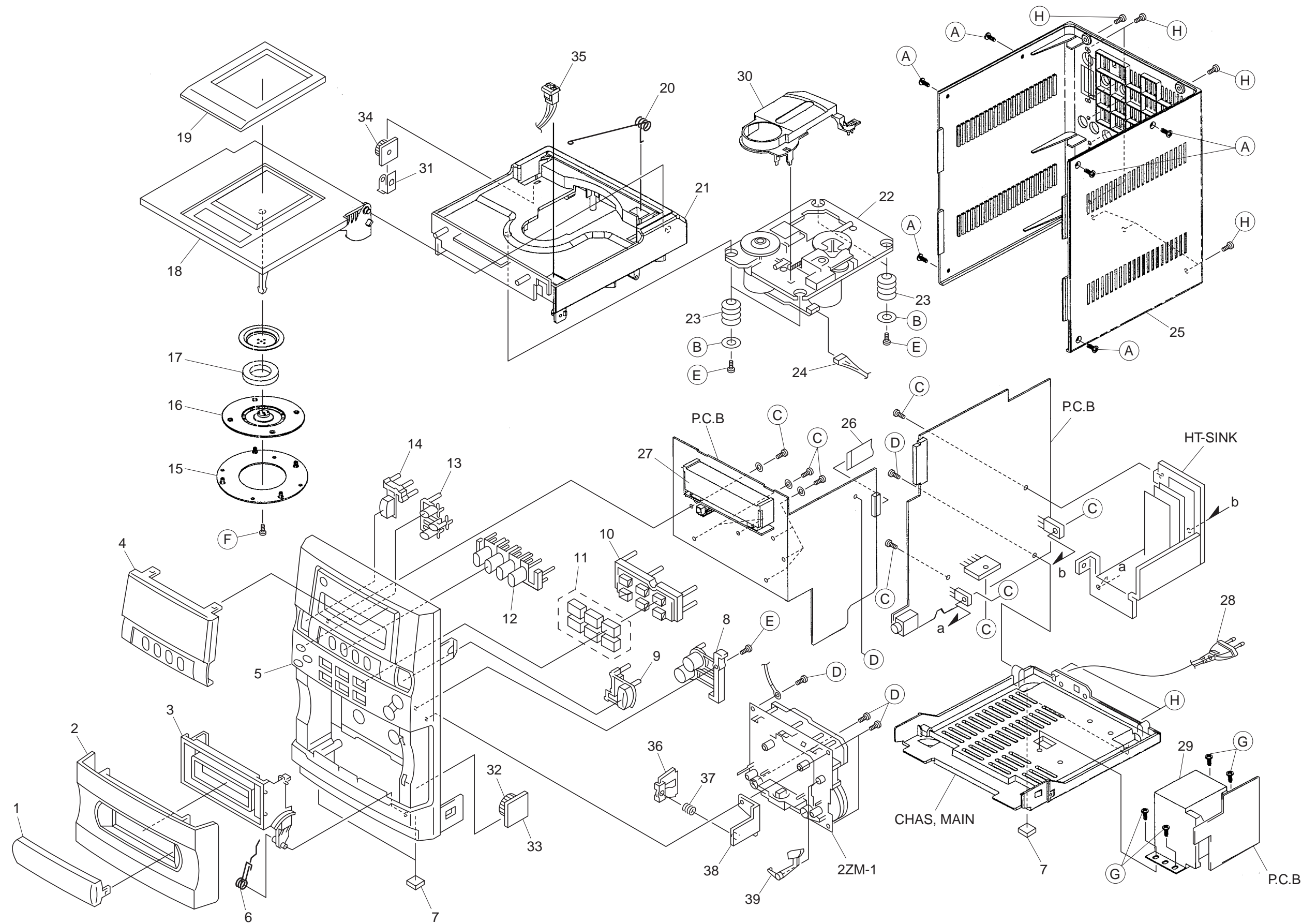
MECHANICAL PARTS LIST 1/1

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

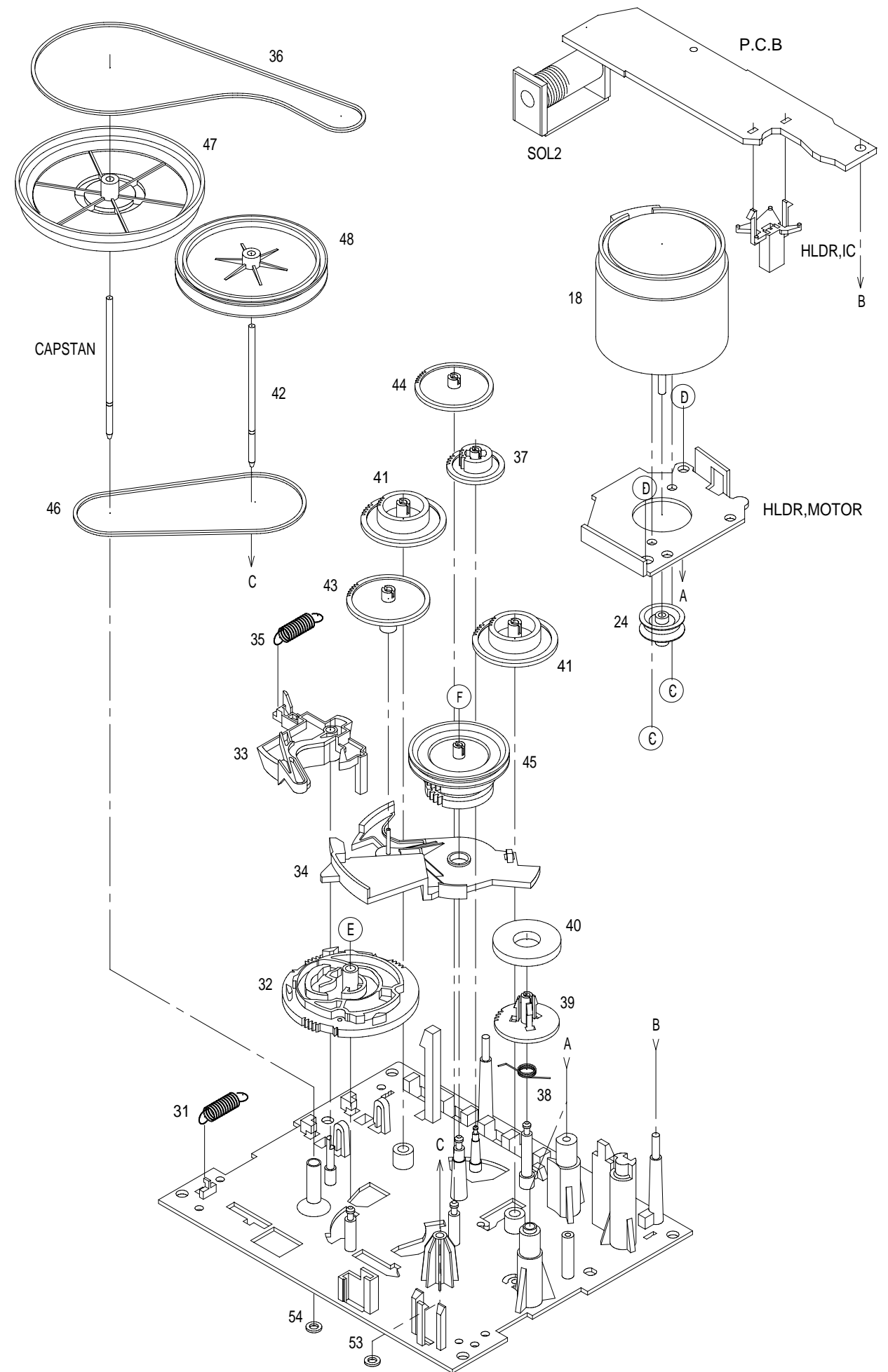
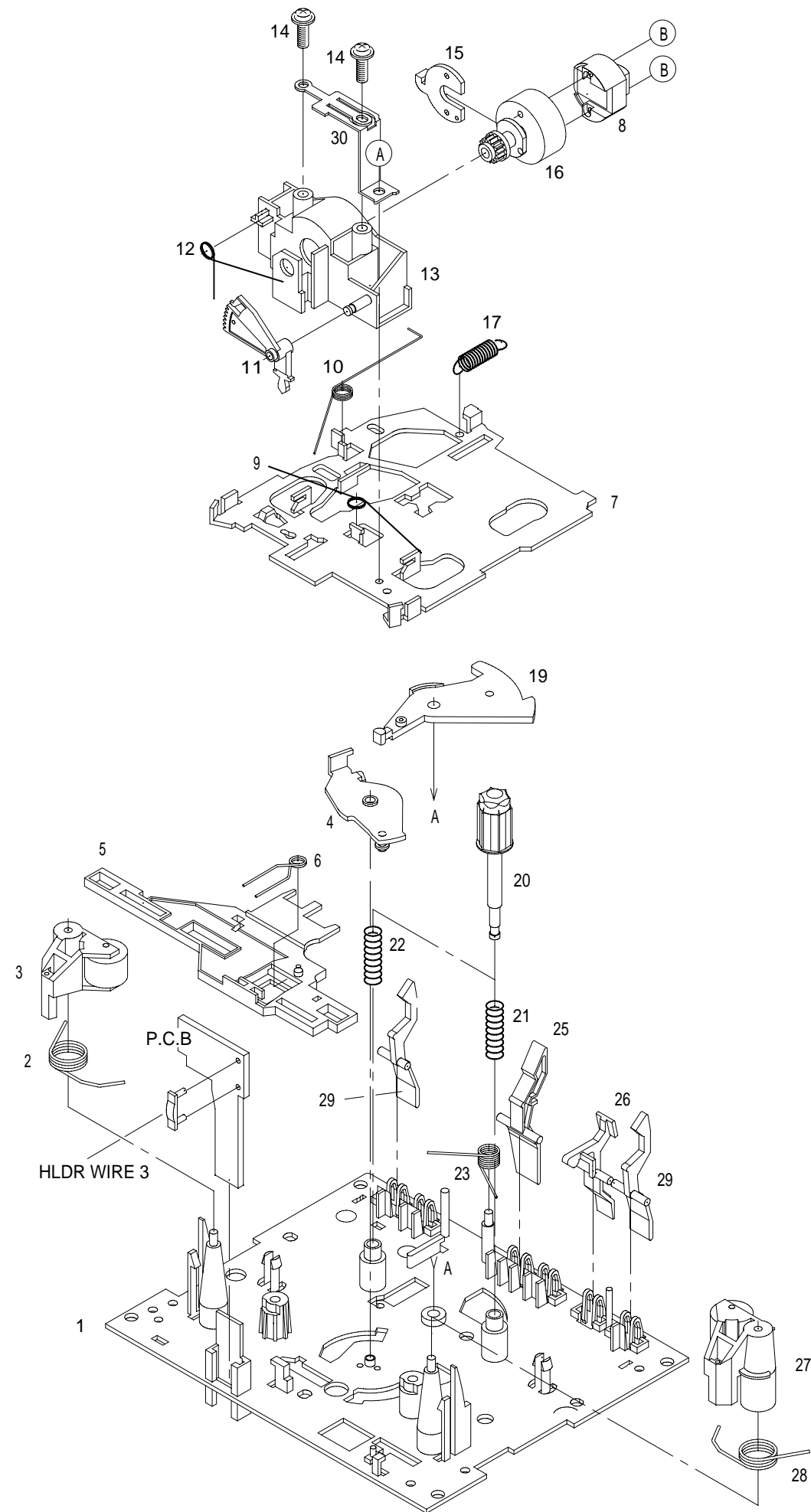
REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	8A-CLA-007-010		WINDOW,CASS	26	8Z-CL8-682-010		FF-CABLE, 16P 1.0 180MM
2	8A-CLA-005-010		LID,CASS	27	8Z-CL8-201-010		GUIDE,LCD
3	8A-CLA-006-010		BOX,CASS	28	87-A80-110-010		AC CORD ASSY,U SPT-2W
4	8A-CLA-004-010		WINDOW,DISP	29	8A-CLA-627-010		PT,U ACL-A
5	8A-CLA-001-010		CABI,FRONT	30	8Z-CDB-169-010		PANEL,CD SANYO
6	8Z-CL8-209-010		SPR-T,CASS	31	8Z-CL8-214-010		DMPR,HLDR BE
7	8Z-CL8-204-010		CUSH,FOOT	32	84-CD5-215-010		GEAR
8	8A-CLA-010-010		KEY,VOL	33	84-CD5-216-010		BRACKET
9	8A-CLA-013-010		KEY,TIMER /SLEEP	34	86-NFZ-231-010		DMPR,70
10	8A-CLA-008-010		KEY,CONT	35	87-064-108-110		HLDR,NC LUTCH
11	8A-CLA-009-010		KEY,CONT CAP SET	36	82-NF5-229-010		PLATE,LOCK
12	8A-CLA-015-010		KEY,FUNC	37	82-NF5-228-010		SPR-C,LOCK
13	8A-CLA-011-010		KEY,GEQ	38	88-CL5-202-010		HLDR,CASS LOCKE R
14	8A-CLA-012-010		KEY,POWER	39	88-CL5-203-010		LEVER,CASS LOCKE R
15	8Z-CDB-170-010		BASE,CHUCK	A	87-B10-239-010		QT2+3-8 W/O CR
16	88-CD9-211-210		RING,CHUCK	B	8Z-CL8-220-010		W,30-0856-01-01-01
17	87-036-368-010		MAGNET	C	87-067-579-010		TAPPING SCREW, BVT2+3-8
18	8A-CLA-002-010		LID,CD	D	87-067-703-010		TAPPING SCREW, BVT2+3-10
19	8A-CLA-014-010		WINDOW,CD	E	87-342-074-010		UT2+2.6-8
20	8Z-CL8-205-010		SPR-T,CD	F	87-571-033-410		TAPPING SCREW, VIT+2-4
21	8A-CLA-003-010		CHAS,CD	G	87-761-097-410		VFT2+3-10 GLD
22	M8-ZZK-E90-070		DA11T3C	H	87-B10-230-010		BVT2+3-10 W/O SLOT SILVER CR
23	88-CT6-206-010		CUSHION,CD				
24	8Z-CL8-681-010		CONN ASSY,6P CD MOTOR				
25	8A-CLA-021-010		CABI,REAR				

COLOR NAME TABLE

Basic color symbol	Color	Basic color symbol	Color	Basic color symbol	Color
B	Black	C	Cream	D	Orange
G	Green	H	Gray	L	Blue
LT	Transparent Blue	N	Gold	P	Pink
R	Red	S	Silver	ST	Titan Silver
T	Brown	V	Violet	W	White
WT	Transparent White	Y	Yellow	YT	Transparent Yellow
LM	Metallic Blue	LL	Light Blue	GT	Transparent Green
LD	Dark Blue	DT	Transparent Orange		



TAPE MECHANISM EXPLODED VIEW 1/1

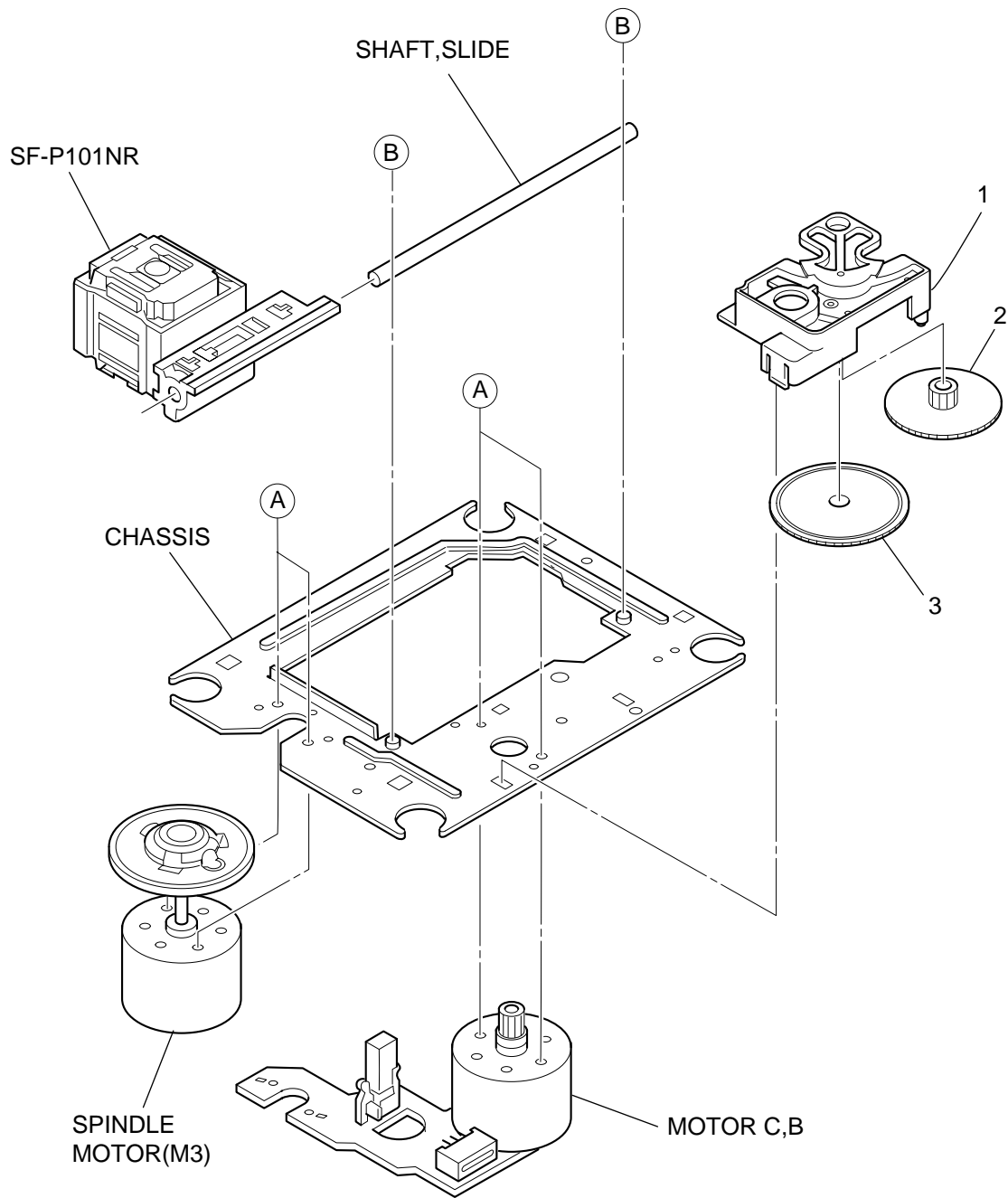


TAPE MECHANISM PARTS LIST 1/1

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If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION	REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	82-ZM1-327-310		CHAS ASSY,RM	31	82-ZM1-255-310		SPR-E,LVR DIR
2	82-ZM1-258-210		SPR-T,PINCH L	32	82-ZM1-221-310		GEAR,CAM(*)
3	82-ZM1-341-210		LVR ASSY,PINCH L2	33	82-ZM1-227-310		LVR,TRIG
4	82-ZM1-295-310		PLATE ASSY LINK	34	82-ZM1-224-410		LVR,FR
5	82-ZM1-266-310		LVR,DIR	35	82-ZM1-305-210		SPR-E,TRIG 2
6	82-ZM1-214-010		SPR-T,DIR	36	82-ZM1-340-010		BELT,SBU MAIN2
7	82-ZM1-206-910		CHAS,HEAD	37	82-ZM1-223-010		GEAR,PLAY
8	87-046-399-110		HEAD,PPH YK56R-BS411	38	82-ZM1-322-010		SPR-T,FR 60
9	82-ZM1-269-210		SPR-T,BRG	39	82-ZM1-220-210		GEAR,IDLER
10	82-ZM3-323-110		SPR-T,LINK 3	40	82-ZM3-616-010		RING MAGNET 4
11	82-ZM1-210-110		GEAR,H T	41	82-ZM1-216-410		GEAR,REEL
12	82-ZM1-213-010		SPR-T,HEAD	42	82-ZM1-236-010		CAPSTAN,2-41.5
13	82-ZM1-207-910		GUIDE,TAPE	43	82-ZM1-225-210		GEAR,FR
14	82-ZM1-283-310		S-SCREW,AZIMUTH	44	82-ZM1-226-010		GEAR,REW
15	82-ZM1-314-110		PLATE,HEAD	45	82-ZM3-333-310		SLIP DISK ASSY 2
16	82-ZM1-208-310		HLD,HEAD	46	82-ZM1-338-110		BELT,FR 4
17	82-ZM1-218-010		SPR-E,HB	47	82-ZM1-349-110		FLY-WHL,R W
18	87-045-347-010		MOT,SHU2L 70	48	82-ZM1-348-110		FLY-WHL,L W
19	82-ZM1-222-210		LVR,PLAY	A	82-ZM1-315-010		S-SCREW GUIDE TAPE
20	82-ZM1-217-410		REEL TABLE	B	80-ZM6-207-010		V+1.6-7
21	82-ZM1-244-510		SPR-C,BT	C	87-251-070-410		U+2.6-3
22	82-ZM1-285-410		SPR-C,BT L	D	87-741-073-410		UT2+2.6-6 GLD
23	82-ZM1-257-010		SPR-T,CAS	E	87-B10-008-010		W-P,2.08-8-0.4-SLIP
24	82-ZM1-247-110		PULLEY,MOTOR				
25	82-ZM1-242-010		LVR,CAS				
26	82-ZM1-243-010		LVR,STOP				
27	82-ZM1-344-210		LVR ASSY,PINCH R2				
28	82-ZM1-259-210		SPR-T,PINCH R				
29	82-ZM1-240-110		LVR,REC(*)				
30	82-ZM1-298-010		SPR-P EARTH				

CD MECHANISM EXPLODED VIEW 1/1



CD MECHANISM PARTS LIST 1/1

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
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REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	S2-121-A28-400		COVER GEAR
2	S2-511-A21-000		GEAR MIDDLE
3	S2-511-A21-100		GEAR,DRIVE
A	S1-PN2-03R-0SE		SCR PAN PCS 2-3
B	87-261-073-410		SCR S-TPG FLT 2.6-6
ALL	M8-ZZK-E90-070		DA11T3C

SPEAKER PARTS LIST 1/1

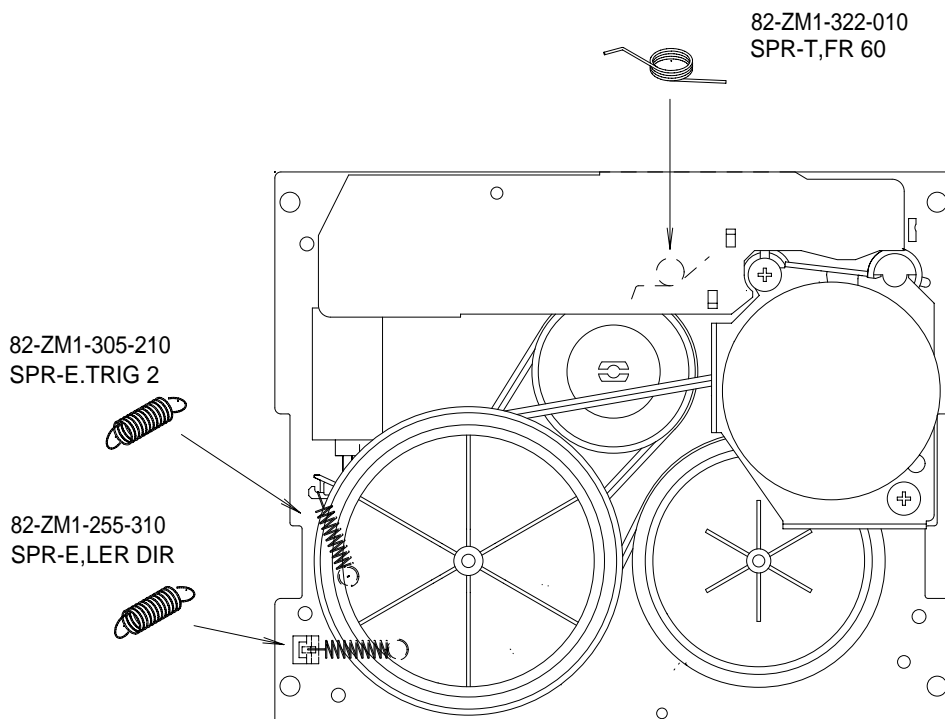
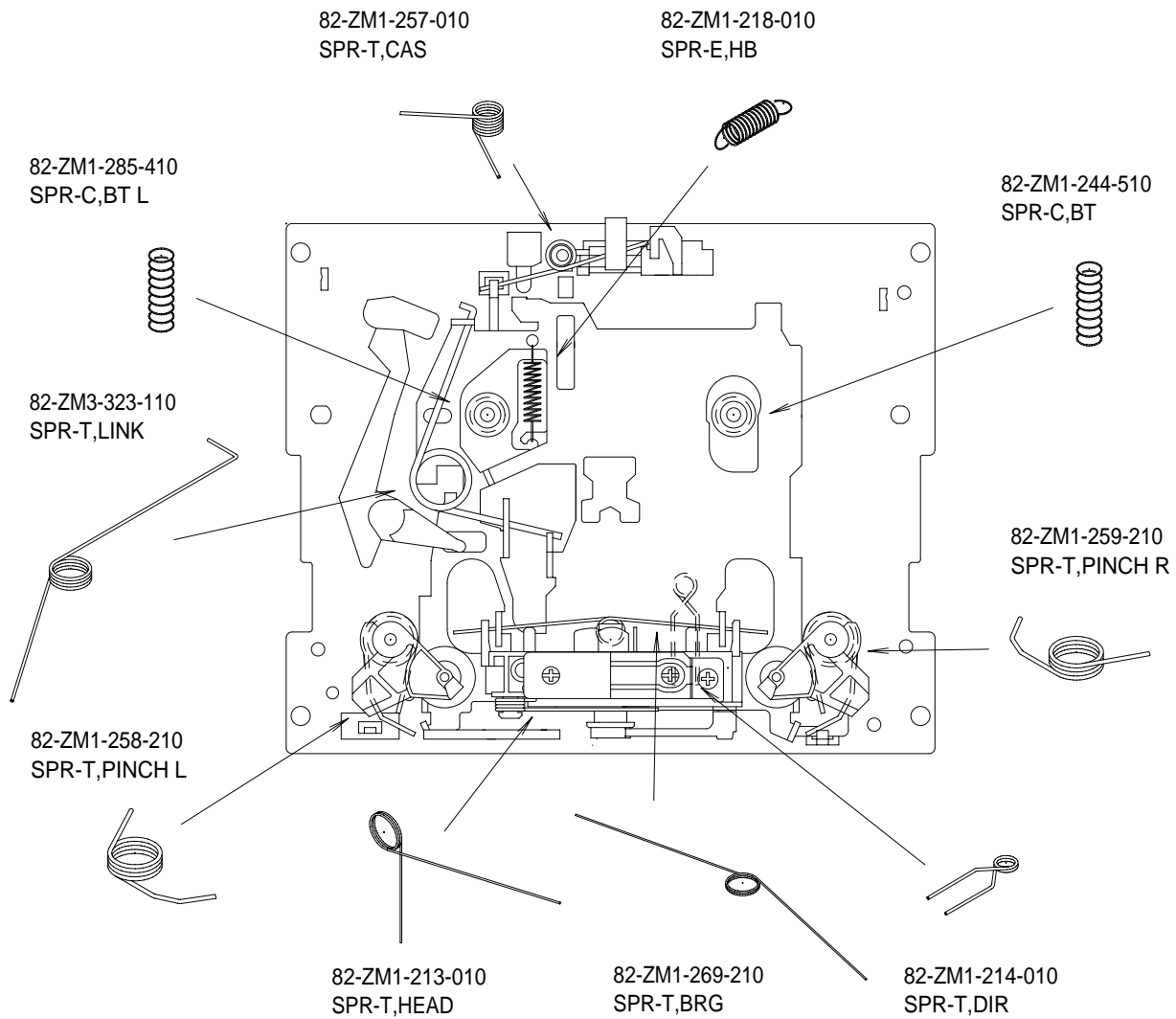
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REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	8A-CLA-602-010	SPKR, 40HM 8W ACL-A	
2	8A-CLA-017-010	CABI,FR SPKR	
3	8A-CLA-022-010	CLOTH,SPKR	
4	8A-CLA-019-010	FRAME,SPKR	
5	86-CL9-214-010	HLDR, CORD (SPKR)	
6	8Z-CL8-207-010	HLDR,TRANS	
7	8Z-CL8-694-110	CORD,SPKR GRY	

- The speakers that are supplied with the following models, are dedicated speakers for their respective models.
Speakers of LCX-337 and those of LCX-357 have completely the same outside appearance but have no compatibility each other.
Therefore, be careful not make mistake when using the speakers of the following models.

LCX-357	Speaker wire color is gray. 8Z-CL8-694-110
LCX-337	Speaker wire color is black. 8A-CL8-695-110

SPRING APPLICATION POSITION



ACCESSORIES/PACKAGE LIST

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
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REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	8A-CLA-903-010	IB,U(ESF)B	
2	87-A90-030-010	ANT,LOOP AM-NC C	
3	87-043-115-010	ANT,FEEDER FM	
4	8A-CLB-961-010	RC UNIT,RC-AAT11	



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